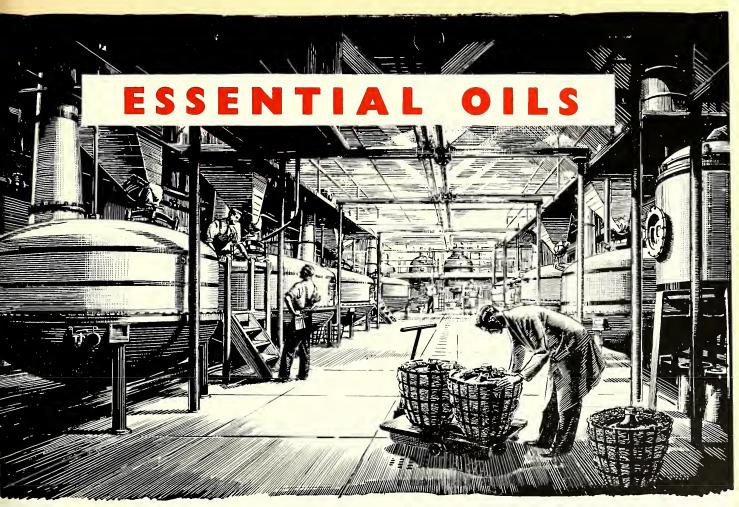
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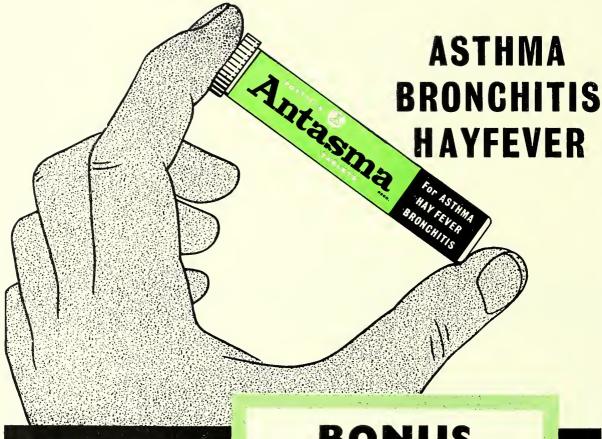
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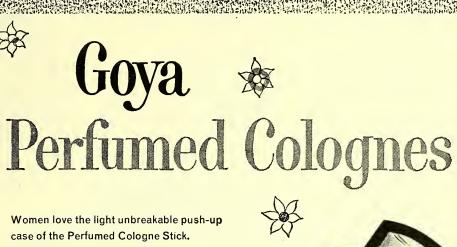
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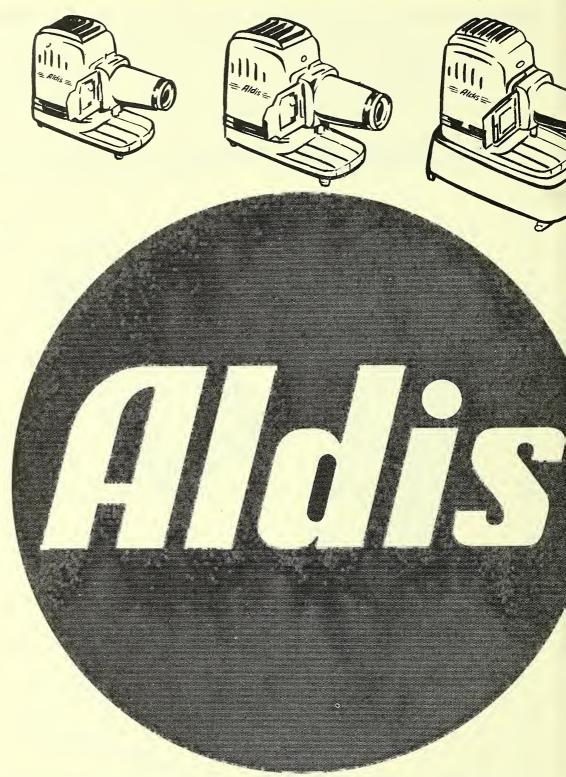
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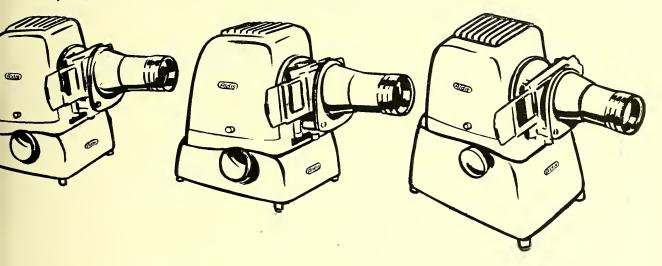
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THE AGRICULTURE (FIRST AID) REGULATIONS 1957

#### UNDER LAW BY 1st AUGUST 1957

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must have regulation First Aid Outfits

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FIRST AID

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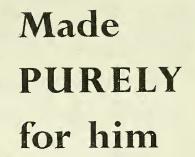
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- 1. 'The Art and Craft of Hairdressing'. (New Era Publishing Co. Ltd.)
- 2. PHARMACEUTICAL JOURNAL, March 11th, 1933, page 203.
- 3. 'War-time cosmetic formulas: VIII Hairdressings' CHEMIST & DRUGGIST, June 28th, 1941, page 376. 4. U.S. Patent 2776760.

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Cellow Gold'
Blonde, Gray, Rose
Gray, White Gold,
Platinum Blonde

Mid Blondeand Mellow Gold, Light Blonde Champagne Blonde, Gray Rose Gray

Ultra Light Blonde

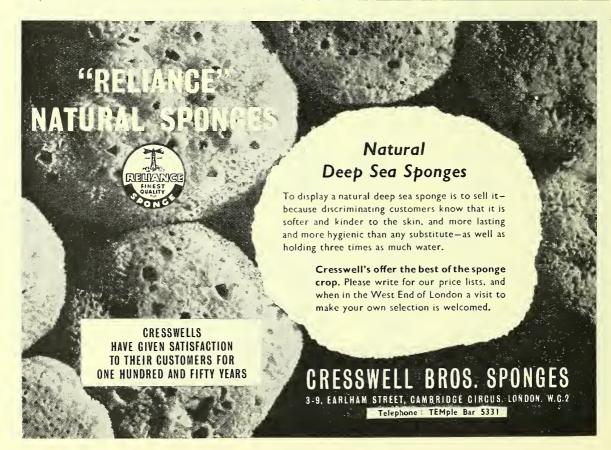
Mellow Gold, Rose Blonde, Gray Rose Gray

White, Grey, or Grey mixed Gray, Rose Gray with natural colour

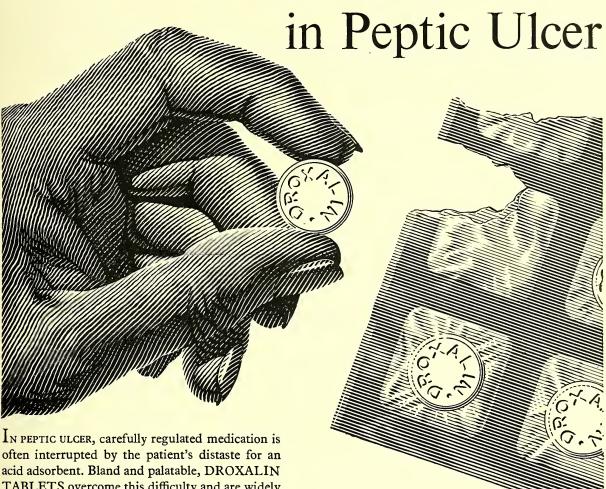
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Chart on Reverse



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50	Methyltestosterone B.P.
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Z	Oestradiol Monobenzoate B.P.
Adm.	Oestrone B.P.C.
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*	Prednisolone
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## HEMIST RUGGIST

The weekly newspaper for pharmacy and all sections of the drug, pharmaceutical and fine chemical, cosmetic, and allied industries

Official organ of the Pharmaceutical Society of Ireland and the Pharmaceutical Society of Northern Ireland

Volume 168

July 20, 1957

No. 4039

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A combination of pethidine with the narcotic antagonist levallorphan tartrate in proportions which minimize respiratory depressicn without affecting analgesia.

The administration of these two drugs in a preformed mixture is an attractive idea which offers the freer use of this analgesic without incurring undue respiratory depression.

Anaesthesia, 1957, 12, 174.

'Lorfan' (levallorphan) does not diminish the analgesic effect of pethidine and clinical observations show that it may enhance the sedation produced by pethidine.

Lancet, 1957, i, 128.

The use of 'Lorfan' to diminish the respiratory depression caused by the narcotic analgesics in childbirth is one of the most valuable potentialities of this antagonist.

Lancet, 1957, i, 213.

Pethidine 100 mg. **plus** 'Lorfan' 1.25 mg. are now combined in 2 c.c. ampoules with the trade mark

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Available in boxes of 12 and 100.

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Volume 168

JULY 20, 1957

No. 4039

## **Key Industry Duty**

#### MANY CHEMICALS ADDED TO LIST

PREDNISONE, prednisolone and thiazole are among a batch of fifty-six chemicals which become liable to Key Industry Duty under an Order, published as S.I. 1957, No. 1215, coming into operation on July 22. The complete list of new items is given below:—

p-Acetoxybenzoic acid

N-Acetylsulphanilyl chloride

2-Amino-4: 6-dimethylpyrimidine 2-Amino-5-methyl-

1:3:4-thiadiazole 6-Aminothymol Azobenzene-4-sulphonic acid

monoBromomonochloro-1:1:1-trifluoroethane

Cadmium *n*-decoate Carbodicyclohexyldi-imide

2-Chloro-1:4-dimethoxybenzene

2-Chloro-10-(3 - dimethylaminopropyl)phenothiazine and its hydrochlor-

α-monoChloro-noctoic acid

2-Chlorophenothia-

1-[3-(2-Chloro-10phenothiaziny1) propy1]-4-methy1piperazine, its hydrochloride and maleate

a-monoChloropropionic acid

2-Chloroquinoxaline monoChloro-1:1:1trifluoroethane monoCyanoacethy-

drazide
2:7-Diaminofluorene
Dibenzyl disulphide
Di-n-butyltin diacetate

1:3-Dichloro-5:5-dimethylhydantoin Dichloromethyl cyanide Diethylammonium salicylate

3:4-Dimethoxyphthalic acid 2:5-Dinitrofluorene Di-n-octyltin dilaur-

Di-n-octyltin maleate Di-n-octyltin oxide 2:4-Distyrylphenol

ate

4-Hydroxyazobenzene-4'-sulphonic acid

p-Hydroxybenzylacetone Indoxyl n-butyrate monoMethyldi-

chlorosilane
3-Methyl-1-phenylpentan-3-ol

3-Methylpiperidine Morpholinium salicylate

p-Nitrophenyldiazonium fluoroborate Phenoxyacetamide Phenoxyacet-2-hy-

droxyethylamide Phenylacet-2hydroxy-ethylamide

hydroxy-ethylamide Prednisolone, prednisone, and their acetates

Propionylthiocholine chloride Sodium a-mono-

chloropropionate Sodium 2-hydroxypropane-1-sulphonate

Sodium isethionate Sodium N-lauroylsarcosinate

Sodium propene-3sulphonate Thiazole

a-2:4:6-Tri-iodophenoxy-n-butyric

#### Synthetic Œstrogens

NEW ADVICE ON SUPPLY

THE Pharmaceutical Society is advising pharmacists that they may supply, otherwise than to or on the prescription of a veterinary surgeon or veterinary practitioner, synthetic æstrogens used for the chemical caponisation of poultry

or for use by implantation to assist the fattening of animals. Since 1952 the Society has advised pharmacists not to supply except to or on the prescription of a veterinary surgeon or veterinary practitioner, synthetic estrogens other than preparations used for the chemical caponisation of poultry.

#### **Statutory Committee**

INQUIRY TO BE RESUMED

THE Statutory Committee of the Pharmaceutical Society is meeting at 17 Bloomsbury Square, London, W.C.1, at 2.30 p.m. on July 31 to resume an inquiry adjourned from June 5 concerning reports from which it appears that a member of the Society has been convicted of offences under the Pharmacy Acts and the Magistrates' Courts Act, made false statements concerning the ownership of a business to the registrar of the Society and entered into a fictitious and improper arrangement with an unregistered person in relation to the ownership of the business; and also to consider information and evidence from which it appears

that a member of the Society has been convicted of an offence under the Larceny Act, 1916.

#### **Health Service Costs**

REVISED ESTIMATE FOR 1957-58

REVISED estimates of expenditure on the National Health Service in England and Wales and in Scotland for 1957-58 show a reduction of the original estimates by £13,796,000. That sum represents the difference between the yield of the new National Health Service contribution and the extra provisions made for the interim salary increases to doctors and dentists in the hospital and family practitioner services. The pharmaceutical estimates for Scotland are increased by £213,000 to provide for increased payments arising from the settlement in February 1957 of revised fees for pharmaceutical services. Estimates for the pharmaceutical services in England and Wales are unchanged. Copies of the revised estimates are obtainable from H.M. Stationery Office, price 3s.

#### Tranquilliser Drugs

DOCTORS' DISCUSSION

THE possible social evils of the "perfect tranquilliser drug of the future" were discussed at the scientific meeting of the British Medical Association at Newcastle-on-Tyne on July 16. They would, it was stated, so remove tension and anxiety that people would accept anything. Dr. E. H. KITCHING (consultant psychiatrist, Manchester United Hospi-



LABORATORY VISIT: Members of the Harrow Branch of the Pharmaceutical Society watching an assay operation in progress in the laboratories of Parke, Davis & Co., Ltd., Hounslow, during a branch outing recently.

tals) spoke of the "big business" of tranquillisers and said that already they had become a social habit in some eommunities. Pressure by the drug houses and the patient on the doctor accounted for the present status of the tranquillisers, but in the long run the doetors' attitude would determine the success or failure of tranquillisers in Britain. In his experience it was rare for neurotic persons to feel better on tranquillisers for longer than a week or so. Many complained of feeling worse and asked that the drugs should be discontinued. Other patients told the doctor that they felt no effect at all, a criticism which, he said, applied particularly to benactyzine compounds and the meprobamate group. As far as out-patients were concerned, the speaker said that the tranquillisers were at least as dangerous as the barbiturates, nothing like as effective and much more expensive. Dr. L. C. Cook, Dartford, a mental hospital specialist, elaimed that the recent revolution in the mental hospitals had been aided by the tranquillisers. In a few years overerowding, such a burden to patients and nurses, would no longer exist. That would be largely the result of using tranquillising drugs. THE CHAIRMAN (Dr. Alexander Kennedy, professor of psychological medicine at Edinburgh University) said that when reserpine was given for four or five months for the relief of high blood pressure, it was liable in about 50 per cent. of cases to produce a depressive state of mind in the patient. Reserpine was used in conjunction with electro-shock treatment, but psychiatrists were now beginning to wonder if some of the sudden deaths that occurred during that form of therapy might not have been contributed to by the tranquillisers. The healing power of whisky was praised by PRO-FESSOR CHARLES ROB (professor of surgery, London University), discussing limb embolism. He said: "I think the best drug for the relief of pain is alcohol, and I do not mean anything pharmacological but whisky. It is an extremely good drug for reducing pain in these patients and helping them to sleep. We put our patients on big and repeated doses of whisky up to the maximum tolerance in individual cases."

#### Scarcity of Pharmacists

CO-OPERATIVE EXPANSION AFFECTED

IN the annual report of the Co-operative Panel of Chemists, submitted to the recent Co-operative Congress, it is stated that qualified labour is still the scareest commodity in drug departments. But for that fact Co-operative development and expansion would be greatly increased. "By putting service and standards first, and by reeognising that the pharmacy is not 'just a shop' but an establishment where highly skilled professional knowledge is placed at the disposal of the public in a very personal service," the report continues, "Societies are rapidly breaking down prejudices which hitherto have died hard, even among co-operators. The Panel has given serious consideration to the question of training pharmacy assistants, and along with representatives of the Co-operative College is exploring

the practical possibilities of compiling eorrespondence courses in appropriate subjects. Unfortunately, it is impossible to undertake full-time training of pharmacists. The Pharmaceutical Society of Great Britain is the registering body and there is no likelihood of them sanctioning a course for pharmacists at the Cooperative College, even if it were an economic possibility to provide one. Nevertheless, it is felt there is some justification for providing courses of instruction for apprentices in pharmacy, to be undertaken during indentureship, and also for dispensing assistants and drug assistants."

## Soap and Detergents EUROPEAN PRODUCTION ASSESSED

A REPORT by the soap and detergents working party of the O.E.E.C. Chemical Products Committee states that for the fourteen European countries which together account for practically the entire output of soap and synthetic detergents of the member countries, soap production in 1956, at 1,600,000 tons, was 4 per cent, higher than in the year before. In 1956, production of synthetic detergents, at nearly 900,000 tons, was 14 per cent. higher than in 1955. The working party considered that the inerease in soap production in 1956, especially in some of the countries coneerned, was due to a temporary increase in demand as a result of the political situation at the end of the year rather than to a reversal of the downward trend which has been apparent in this sector for a number of years. It seems likely, therefore, that in 1957, soap production may fall particularly sharply in those countries which showed the increase. Production of synthetic detergents may eontinue to expand but at a slower pace than in recent years.

#### Cameras from Japan

NEW QUOTA ESTABLISHED

FOLLOWING the general trade agreement with Japan for the period ending September 30 (C. & D., April 6, p. 365), a quota of £15,000 has been established for complete cameras, excluding those equipped with a single-element lens or a single eemented doublet of which aperture ratio is equal to or is less than f/8, or focus is fixed. Licences will be valid until December 31. Further details are given in Notice to Importers No. 826

#### SCOTTISH NEWS

#### Pharmacy Federation

MEETING OF EXECUTIVE

A MEETING of the executive council of the Seottish Pharmaceutical Federation was held in Edinburgh on July 3, Mr. Andrew Officer (president) in the chair. The Federation's accounts for the year ended April 30 were unanimously approved and adopted. The accounts were considered satisfactory. Mr. Officer reported that the response of chemists in Glasgow to the work done by the Chemists Federation local action committee had been good. Reports were given of meetings of the Pharmaceutical Standing Committee (Scotland) and of the Pharmaceutical General Council (Scotland) attended by

the Federation's representatives. It was reported that many members had expressed appreciation of the Federation's clearing house service. The annual joint dinner of the Seottish Department of the Pharmaceutical Society, the Pharmaceutical Standing Committee (Scotland) and the Scottish Pharmaceutical Federation is being held in the Adam Rooms, George Hotel, Edinburgh, on October 23, with the Scottish Department as hosts. The following new members of council were declared elected:— Aberdeen and North-eastern Area, Messrs, W. T. Elder and John D. C. Anderson; Dundee and East and Central Area, Mr. J. W. Scott; Edinburgh and Southeastern Area, Messrs. A. W. Keith. J. Crawford Lamb and A. M. McKellar; Glasgow and South-western Area, Messrs. Andrew Officer, Hugh W. Thomas, W. Peebles, W. Spence Culbert, Fred Baillie and Donald M. Fraser; Inverness and Northern Area, Mr. John J. McEwan. Mr. Andrew Offieer, Glasgow, was re-appointed *President* of the Federation and Mr. W. Peebles, Glasgow, was appointed *Vice-president*. Matters dealt with in the secretary's report included: In-demnity claims against members, one of which had been settled for £100, legal expenses of £21 and outlays of £3 3s.; claims against members for holiday wages; claims against members for wages in lieu of notice where assistants had left the members' services without giving due notiee; elaim against a member for £209 as wages underpaid to an assistant during 1954 and 1955 (the secretary took up the matter on the member's behalf and the claim against him was dropped); member's claim against British Railways in respect of a earton of goods to the value of £17 which was lost (British Railways had repudiated the elaim by the member but the secretary was able to obtain an ex gratia payment of £8 10s. for the member); complaint against a member under the Food and Drugs (Adulteration) Aet, 1928, which was withdrawn.

#### Pharmacy Prize-winners

CEREMONY AT EDINBURGH

SPEAKING at the annual presentation of prizes at the Heriot-Watt College, Edinburgh, on July 11, BAILIE H. A. BRECHIN said that the extensions to the College costing  $\pounds_{2}^{1}$  million were nearing eompletion. When eompleted, the improvements would enable the college to be well in the vanguard of progress to meet the new age of specialisation.
Among prizes presented by Lord Provost Ian Johnson-Gilbert were: PHAR-MACY, THIRD YEAR:—Duncan Memorial Medal and Prize, Laurence C. Cameron, Edinburgh; J. Rutherford Hill Conference Prize for Pharmaceutics and Prize presented by Boots Pure Drug Co., Ltd., for Pharmacognosy, Ian R. L. Sinclair, Edinburgh; J. Rutherford Hill Conference Prize for Pharmaceutics and Prize presented by Boots Pure Drug Co., Ltd., for Physiology, Neil M. Shaw, Edinburgh; Prize presented by Evans Medical Supplies, Ltd., for Pharma-ceutical Chemistry, Finlay S. Skinner, Edinburgh. SECOND YEAR:—Prizes pre-sented by Evans Medical Supplies, Ltd., for General Excellence, Douglas B. Drummond and Sheila Capstick.

#### **Prescribing Inquiry**

FIRST MEETING OF COMMITTEE

THE gross cost of drugs and medicine used in the National Health Service in Scotland has increased by almost 75 per cent. since 1949. That year it cost £4,477,000, and last year the cost was £7,893,000, equal to more than 30s. per head of the population. That was stated at the first meeting of the Scottish Committee on Prescribing under the N.H.S., held in Edinburgh on July 10 (see C. & D., June 29, p. 686). The committee was set up under the chairmanship of Mr. J. B. Douglas to "inquire into prescribing practice in the general medical services and in the hospital and specialist services in Scotland, with particular reference to the factors governing costs, and to make recommendations." The committee decided to invite evidence from interested parties.

#### No Sunday Opening

BUT A PLAN FOR URGENT MEDICINES

TO assess the demand for Sunday dispensing Dalkeith, Midlothian, chemists remained open during certain hours on a recent Sunday. One chemist had one customer, who asked for a home "perm." Another chemist said all he was asked for was photographic goods, lipsticks and sundries. The nearest to a prescription was a request for headache powders. The result of the test was discussed at a meeting of Dalkeith town council on June 10. Provost James McLean said the chemists had made out a good case for not opening on a Sunday. Arrangements had been made, however, whereby any prescription of an urgent nature would be quickly dealt with by a chemist.

#### NEWS IN BRIEF

A REVISED list of approved names. dated June 1957, has been published by the British Pharmacopæia Commission.

DR. G. H. MACMORRAN, at present assistant resident secretary of the Pharmaceutical Society in Scotland, has been appointed "successor to the resident secretary" as from October 1. The present resident secretary (Dr. D. McCall) is retiring not later than the end of April 1958 [corrected note].

#### SPORT

Golf.—London Chemists' Golfing Society, at Bush Hill Park golf club, on July 11. Despite the fact that only eighteen members were able to attend some good scores were returned. Winners: Kerfoot Trophy, R. P. Carter (1), 65; Leichner Cup, E. G. Nice (9), 66; Professor Flint Cup, G. T. Morson (10), 66; other leading scores, R. Julliard (12), 66; D. A. Savory (14), 68; R. C. W. Poole (8), 68; C. E. S. McIntosh (11), 69.

Cricket.—A team from the cricket section of Birmingham Pharmaceutical Association defeated an eleven from John Richardson & Co., Leicester, Ltd., at a match held at Shirley, Birmingham, on July 7. Colonel J. R. E. Richardson (chairman of the company) captained the Leicester side and after presenting a cup to the Birmingham captain said that he hoped that the match would become an annual event.

#### TOPICAL REFLECTIONS

By Xrayser

Fair Trade

The pharmacists of the Republic of Ireland have good reason to feel satisfied with the outcome of the protracted investigation into the question of fair trading (p. 31). A reading of your report conveys the impression that the case was very well presented and—what is equally important—that those who examined the evidence showed a clear appreciation of the problems. It is not often that an outside body shows such a firm grasp of the many complex factors involved, and it seems to me, from the report itself, to have been a particularly fair trade inquiry. I was especially impressed by the paragraph dealing with the wide selection of medical preparations that require to be stocked by a wholesale chemist in order that he in turn might supply the retailer with the many single items in demand today. Without an intimate knowledge of the position in Eire, one must assume that the situation bears a strong resemblance to ours on this side of the Irish Channel. The retailer is constantly indebted to the wholesaler for yet another new product, and the wheels keep turning with remarkable smoothness. No pharmacy can hope to stock more than a token selection of the vast output of new preparations, yet the report recognises that "the average retail chemist carries a wide variety of stock which is substantial in relation to the annual cost of goods sold." There seems to be good reason for satisfaction amongst Irish pharmacists.

#### Freedom for the Doctor

Your report of the pamphlet published by the Fellowship for Freedom in Medicine (p. 27) makes interesting reading. It appears that the Fellowship is extremely dissatisfied with the Guillebaud report on the National Health Service, and displeased that its own evidence before that inquiry failed to impress to the extent that the Fellowship expected. One or two of its proposals should make an immediate appeal (!) to pharmacists. For example, the Fellowship thought (and thinks) that the payment should be imposed of a returnable cash deposit on medical containers. It seems unlikely that those who put forward such a suggestion have ever had personal experience of the working of such a scheme as it existed under National Health Insurance. Any attempt to reimpose such a source of friction would see the immediate establishment of a Fellowship for Freedom in Pharmacy—and a very militant organisation it would be! In discussing patient pressure on the doctor to prescribe pills and bottles of medicine, the freedom-loving doctors deplore the fact that the nation should spend more than 18s. on the chemist for every £ spent on the doctors. I am at a loss to understand the substance of that argument. It does seem to overlook the fact that a certain outlay is required before the chemist handles the 18s. Altogether, the Fellowship does not appear to be greatly impressed with the findings of the Guillebaud Committee.

#### Faint Praise

The remarks of Dr. C. A. Clarke in the July issue of The Practitioner (p. 28) are important. He comments that "it cannot be too strongly emphasised that chemists must not undermine the doctor's authority.' According to Dr. Clarke, two colleagues of his who possess also pharmaceutical degrees have told him that all the doctor's efforts on behalf of a patient may be undone by the chemist who may be asked for his views on the prescription. "Remarks such as: 'There is nothing in this that can do you any harm,' may wreck the placebo which has been the finale of a heart-to-heart confidence-restoring talk." I cannot imagine that the charge is true of the vast majority of chemists, who regularly find themselves fencing with considerable dexterity to parry awkward questions from customers of an inquiring mind. I believe that the incident described may have happened, for man is not immune from indiscretion, be he chemist or doctor. But I feel sure that annoying and unnecessary criticism, direct or implied, is no more common in pharmacy than it is in medicine.

## Smaller Units' Place in Chemical Industry

#### PRESIDENTIAL ADDRESS AT ANNUAL MEETING IN LEEDS

HAVE small units still a place in the modern chemical industry? The question was discussed by Mr. Julian M. Leonard in his presidential address to the Society of Chemical Industry in Leeds on July 9. The small units, he said, were apt to be overlooked beside the much greater cohorts today. Though his own view was that there would always be room for them, how difficult it was nowadays for any small business to get started! For the early pioneers of the industry matters had been relatively easy. For the most part they had invented a process or at least adopted one and were proceeding to develop it. Possibly they were industrialists first and chemists second, yet all had had a special interest in chemistry. In establishing themselves they had been unhampered by many modern difficulties. They could choose a site easily; labour was abundant even though at first unskilled; they could bigger they could be a site of the cou hire and fire quite freely; they could readily finance the business from their own resources or could obtain the money without great difficulty; a market for their products either existed or could very easily be cultivated; and taxation took only a small part of their profits. Against that they had a narrow choice of plant; they often worked in the dark about the true nature of their process; had not the benefit of any general research; and had no welldeveloped chemical-plant industry at their call. Often their greatest advances came from taking an intelligent jump ahead on little more than a hunch. Even today such a fortunate accident

could happen, as with vitamin  $B_{12}$ .

The composition of the industry had greatly altered, probably for the better. The siting of factories was rightly controlled so that social amenities were preserved; most of the legislation limiting the freedom of the industry (the Acts to do with factories, public health, explosives, petroleum, alkali, electricity, distribution of industry, prevention of pollution, etc.) had developed from an early enactment directed against the textile industry, and been widened to all industries, making "a forbidding array of musts." The welfare of employees must always be studied (though he claimed that chemical trade employers had always been reasonably good). Economic factors influencing the industry's expansion had been mainly internal, and the amalgamations had been brought about not to enable prices to be raised but to avoid extinction by bringing about rationalisation.

#### Protection and the Start of Research

The Patents legislation in Britain had favoured foreign manufacturers, with the result that, at the commencement of the 1914-18 war, the country had been in dire straits. Hence protective legislation such as the Dyestuffs Regulations and Safeguarding of Industries Acts. Key Industries Duty, though applied to specific chemicals, had benefited the industry as a whole. Research

—vital to the industry—had had its earliest recognition in Britain at the establishment of the Department of Scientific and Industrial Research in 1915, and most industries now had their research associations, apart from the research activities of individual manufacturers. Research, a vital need to the chemical industry, took time. It was a tribute to the chemical industry that its annual expenditure on research was higher than for any industry except electrical engineering and aircraft.

In industrial relations within the industry the white-coated worker and instrumentation were tending to replace charge hands. The large companies and research organisations even had talent scouts snapping up promising students while still at the universities. What chance had the smaller manufacturer? What Yet many students preferred to go to the smaller man. The small manufac-turer must make his opportunities as well as find them. Figures did not bear out the assertion that modern conditions had squeezed him out. would always be a place for him, but he must have confidence in himself and must deserve that place.

#### Other Events of the Week

The Yorkshire section of the Society, hosts for the week, had organised an extremely full and rich programme—so far as outings were concerned so ambitious that some had to be cancelled.

Lectures occupied the mornings of Wednesday and Thursday, and most of those arranged had a special Yorkshire association. "Recent Progress in Coal Science and its Industrial Significance" was discussed by Dr. D. T. A. TOWNEND (director-general of the British Coal Utilisation Research Association), whose hearers would willingly have given him extra time for an extended lecture had that been possible. Dr. D. A. W. Adams (technical director of Hickson & Welch, Ltd., Castleford), who reviewed "Industrial Organic Intermediates: Past, Present and Future," showed a complete mastery of and facility in his subject, alike in his lecture and in his handling of subsequent questions. Professor R. L. Wain (Wye College, University of

London) more than pleased a large audience to whom he gave an insight into "Some Aspects of Research on Plant-growth Substances." The special contribution of Leeds University department of textiles was Dr. Speakman's "Some Relationships between the Structure and Reactivity of Textile Fibres," and Dr. R. L. M. Synge, F.R.S., aided his hearers to distinguish clearly between fundamentals and incidental details in the subject for which he was promoted Nobel Laureate: "Principles of Chromatography."

On Wednesday morning the Society's medallist (Mr. W. J. Worboys, B.Sc., D.Phil.) received his award at the hands of the president (Mr. J. M. Leonard), and afterwards delivered his address (see opposite page).

On the social side the Yorkshire section of the Society were hosts at an informal reception on Monday evening, at luncheon on Tuesday, and at a farewell reception and dance on Friday evening.

The Society's annual dinner on Wednesday evening had as its setting the handsome and spacious hall of University House, and as its speakers COLONEL SIR HAROLD SMITH (chairman of the Gas Council), who in toasting the Society left his hearers in no uncertainty about the importance and continued expansion of the industry he was representing; THE PRESIDENT (Mr. Leonard); Dr. H. K. CAMERON (the Society's honorary secretary for home affairs); the Lord Mayor of Leeds (ALDERMAN J. HILEY), whose wit and humour were acclaimed the outstanding success of the evening; and BRIGADIER J. N. TETLEY, D.S.O., T.D., D.L. (pro-chancellor of the University of Leeds) who more than made amends for his inescapable absence from the annual meeting at which, according to the programme, he should have been welcoming members of the Society to the university.

The University of Leeds was the host at a reception on Thursday evening at which members had the freedom of the pillared central court of the Parkinson building and access to the Brotherton Collection and university library, besides seeing a film depicting the manysided activities of the university.



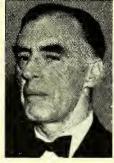
Left: The chairman of the Society of Chemical Industry (Mr. Julian M. Leonard) hands on his chain of office to his successor (Mr. H. Greville Smith). Right: Professor Nasini, Turin, Italy, addresses the Society after being accorded honorary membership.

## "Our World"

#### MR. WORBOYS AS MEDALLIST ADDRESSES INDUSTRIAL CHEMISTS

AT the University of Leeds on July 10 the medal of the Society of Chemical

Industries was ceremonially presented to Mr. W. J. Worboys, B.Sc., D.Phil., Hon. A.R.I.B.A. D.Phil., (a director, Imperial Chemical Industries, Ltd.). Afterwards Mr. Worboys delivered his address. in the course of which he said: This Society is primarily conwith cerned applied chem-



Mr. W. J. Worboys

istry—that is, with the translation of chemical discoveries into productive processes, and with the industrial and commercial development of those processes. For industry to function with full effectiveness all those engaged in it must have their reasonable requirements satisfied, and the climate must be such that all can give their best with enthusiasm. The chemical industry can be proud of its record and, indeed, the lot of man today would be very different if many chemical developments of recent years had not occurred.

ments of recent years had not occurred.

In 1912 Sir William Crookes startled the world by declaring that by the 1930's the world would suffer hunger unless wheat yields were raised. Crookes thought that diminishing rainfall—and in Canada the early onset of winter—would limit the bringing of more acres under cultivation, and the only chance he saw for increasing world food supplies was by increasing yields per acre. The solution he suggested was to make synthetic nitrogenous fertilisers from the unlimited nitrogen in the atmosphere.

#### Nitrogen Fertilisers

The world did not have to wait long after Crookes's speech before things started to happen. In 1915, large-scale commercial production of calcium nitrate by the arc process was begun in Norway and in the same year the Germans started manufacturing calcium cyanamide. By 1939, nearly three-quarters of the world production of combined nitrogen was fixed from the atmosphere. World usage of nitrogenous fertilisers in 1955-56 was approximately 7 million tons of pure nitrogen.

mately 7 million tons of pure nitrogen. World population, 1,550 millions in 1900, had grown to 2,400 millions in 1950, and may well reach 3,600 millions by 1980. The synthesis of ammonia from the nitrogen in the atmosphere has played the part forecast by Sir William Crookes, but synthetic nitrogen has not been the sole contributor to the increased food production. Credit is due to the plant breeders and to improved methods of husbandry.

In addition to providing fertilisers, the chemical industry is also helping in other ways to increase food supplies. The protection of stored grains and other foodstuffs is fairly well established, but a good start has also been made in developing chemicals, and methods for their application, for the control of pests and diseases on growing plants. This is a field of activity in which we will certainly see big developments in the next few years.

#### **Chemistry's Contribution to Medicine**

Better hygiene and better medicinc as well as better nutrition have also been factors in the increase in population. In olden days chemistry was described as "the handmaiden of medicine." Nowadays, to avoid the susceptibilities of both sides, we would perhaps say "consort" or "collaborator" instead of "handmaiden." Certainly the chemical industry's contribution medicine, and to medical methods and practice, in recent years has been striking. Perhaps the first notable modern contribution was the discovery in 1899 of the analgesic properties of acetylsalicylic acid—"aspirin" as we know it—the first perfectly safe analgesic for general use by the public. Then, in 1910, Paul Ehrlich established the effectiveness of Salvarsan, and in this saw the beginning of modern chemotherapy. Salvarsan was no accidental discovery but resulted from a considerable background of experience in and knowledge of the organic chemical industry. In the forty-seven years since the establishment of Salvarsan, we have seen the development of many new drugs: drugs for the treatment of sleeping sickness in man and animals; antimalarials; the range of sulphonamides with their many uses; sulphones for the treatment of leprosy; penicullin and the other antibiotics that have meant so much to man in the last decade and a half; vitamins, hormones, antiseptics, anaesthetics. The list is long but by no means complete.

In the development of refrigeration the skills of the engineer would have been as naught without the refrigerants made by the chemical industry. Without gas storage many of the fruits we enjoy throughout the year would be denied us. And what would we do without the ubiquitous ice cream?

In the field of clothing we have long been familiar with dyestuffs and textile auxiliaries. Now we have manmade fibres. In our homes chemistry contributes at many points.

The field of nuclear energy is quite as much a field for the chemist as for the physicist—a fact which is too little appreciated. It is a matter of satisfaction that the United Kingdom occupies a leading position in the development of the peaceful uses of nuclear energy. It must be a matter of concern to all that she continues to hold this position.

But changes and developments since the turn of the century have not been confined to the chemical industry. There have been substantial economic changes affecting the United Kingdom's position as an international trader, and there has also been a growing liberalism in political and social thinking. These changes, taken together, present new problems to industrial managements.

In 1900. British exports of manufactured goods represented about one-third of the total world exports of manufactured goods. In 1955 they represented only about one-fifth of world exports. Those figures reflect the growth of manufacturing industry, and of exporting capacity, in other countries. It would be both wrong and dangerous to assume that in the future the United Kingdom must become mainly an exporter of capital goods, and that consumer goods have only a small part to play in the country's exports. As countries increase their industrial production, and as their standard of living increases, the demand for the more highly wrought industrial products and for consumer goods increases. To be sure of having a share in this trade, it is essential that British products should be of good design and good quality and sold and serviced with vigour.

During the past fifty years the national income per head of the population has doubled. During that period the distribution of income has become far less unequal than it was in 1900. The resulting increase in the home market is both a source of strength and of weakness: strength because a healthy home market provides a good base for exports; weakness because the competing demands at home may reduce the tonnage available for export, unless the manufacturer is prepared to take risks and invest in additional plant. Weakness also because increasing production means increased imports.

On the political side I would draw your attention to two developments. In 1928 universal suffrage was achieved. I suggest that universal suffrage, not Atomic Energy, is the greatest "uncontrolled" force in our lives—politics being the pursuit of power, and power, in a democracy, being decided by elections.

#### Today's Challenge

The challenge to our forefathers was how to achieve universal suffrage. To our generation the challenge is how to reduce to the minimum the undoubted weaknesses of a political system based on universal suffrage in order that we may enjoy its substantial and precious advantages. There seems no easy way—and certainly there can be no turning the clock back. A growing sense of responsibility throughout the spectrum of adult population and less group and individual selfishness seems the only road.

The rapid rise of the Socialist Party reflected the growing industrialisation of the country and also the growing liberalism and humanitarianism. Today there is little difference of objective between the two political parties on many major matters of domestic policy, though there are notable differences in method. But I think the Socialist Party is deserving of strong criticism for allowing its original, worthy goal of "equal opportunity" to degenerate into the absurdity that "all men are equal." Unless that absurdity is recognised it could bring us all to a common level of poverty.

#### **NEW COMPANIES**

P.C. = Private Company; R.O. = Registered Office

SPACKMAN & McKENZIE, LTD. (P.C.).—Capital £6,000. To carry on the business of chemists, etc. Directors: William C. E. Spackman, M.P.S., and Charles S. McKenzie. R.O.: 63 High Street, Daventry.

DESS CHEMICAL CO., LTD. (P.C.).—Capital £1,000. To carry on the business of agents for and dealers in chemicals of all kinds, etc. Solicitors: Kaufman & Seigal, 72 New Cavendish Street, London, W.1.

SOUTHERN CHEMICAL PLANT CO., LTD. (P.C.).—Capital £100. To carry on the business of consulting chemical engineers. Directors: Montague A. Phillips and Helena M. M. Phillips. R.O.: 56 Islington Park Street, London, N.1.

SURGICAL SYRINGES, LTD. (P.C.).—Capital £100. To carry on the business of manufacturers of and dealers in surgical instruments and equipment of all kinds, etc. Directors: John Dorman (director, Dormex, Ltd.) and Vera M. Towers, 35 Coniston Gardens, Kingsbury.

SCIENTIFIC REMEDY CO., LTD. (P.C.).—Capital £1,000. To carry on the business of wholesale and retail chemists, druggists, etc. Directors: Brian H. Hussey, John A. Richards and Heather Richards. R.O.: 33 South Lawn Terrace, Heavitree, Exeter, Devon.

HARLEY STREET (PHARMA-CEUTICALS), LTD. (P.C.).—Capital £5,000. To carry on the business of manufacturers and distributors of pharmaceutical products of all kinds, etc. Directors: James R. Phillips and Kathleen Smith. R.O.: 77 Harley Street, London, W.1.

L. J. BARTON (PLYMOUTH), LTD. (P.C.).—Capital £100. To acquire the business formerly carried on by the late Leslie J. Barton at Plymouth, etc. Directors: Elsie M. H. Barton, 7 Farington Road, St. Judes, Plymouth; and Edith M. Sedgman, M.P.S. R.O.: 2 Nelson Street, Plymouth.

GORDON'S PHARMACY, LTD. (P.C.).—Capital £4,000. To carry on the business of chemists, druggists, etc. Directors: Ernest Skues, M.P.S., Audrey Skues (directors, Barkers (London), Ltd.), and Gordon H. Chubb, M.P.S. R.O.: 105 Church Street, Croydon, Surrey.

WEST CHEMICAL PRODUCTS. LTD. (P.C.).—Capital £100. To carry on the business of manufacturers of and dealers in chemicals, disinfectants, insecticides, etc. Directors: John F. Zwicky and Alfreda A. Zwicky. R.O.: Salisbury House, London Wall, London, E.C.2.

STANLEY COWGILL, LTD. (P.C.).—Capital £1,000. To acquire the business of retail chemists carried on by the administrators of the late Stanley Cowgill, 76 Victoria Road, Cleveleys, etc. Directors: Ivy Cowgill and James H. Tait, M.P.S. R.O.: 123 Church Street, Blackpool.

WIRRAL PHARMACIES, LTD. (P.C.).—Capital £1,000. To acquire the

business of retail pharmacists carried on by Woodfield Cooke, Ltd., 21 Yew Tree Road, Wallasey, etc. Directors: Harold A. Scholes, M.P.S., Elsie W. Scholes and Gladwyn Daisy Thomson. R.O.: 21 Yew Tree Road, Wallasey, Ches.

A. E. CHARLTON, LTD. (P.C.).—Capital £1,000. To carry on the business of wholesale, retail and manufacturing chemists and druggists, opticians, etc. Directors: Marjorie G. Charlton, Sonia C. Charlton, Gwilym H. Jones, M.P.S., and Alwyn E. Long. R.O.: Talbot Pharmacy, 270 Wallisdown Road, Bournemouth, Hants.

CONDY U'REN & SON, LTD. (P.C.).—Capital £5,000. To acquire the business of a chemist and druggist carried on by Cyril C. U'ren, M.P.S., 55 Cobourg Street, 2 Alvington Terrace, 43 Ryder Road, 23 Johnston Terrace, and Egg Buckland Road, Plymouth, as Condy U'ren & Son, etc. 'Directors: Cyril C. U'ren and Mabel D. U'ren.

KIRKBY CHEMISTS (LIVER-POOL), LTD. (P.C.).—Capital £100. To carry on the business of manufacturing and dispensing chemists, opticians, etc. Directors: Moss L. Valins (director, Speeke Chemists, Ltd.), Melville Valins and Beatrice Kay (director, Craine, Ltd.), R.O.: 117 Broad Lane, Kirkby, Liverpool.

BEADLE, ROBERTS & CO., LTD. (P.C.).—Capital £4,000. To acquire the business of manufacturing chemists carried on by Voltas, Ltd., Southall; and to carry on the business of manufacturers of and dealers in wax and other polishes, etc. Directors: Percy S. H. Leafe, George Brittain, William W. Beadle and Bertram O. Roberts. R.O.: Gem Works, The Green, Southall, Middlesex.

ARTHUR D. LITTLE, LTD. (P.C.).—Registered in Edinburgh. Capital £50,000. To carry on the business of analytical and consulting chemists, etc. Directors: F. N. Woodward (director, Institute of Seaweed Research), R. Stevens and L. W. Bass (president and vice-president, respectively of Arthur D. Little, Inc., Cambridge, Massachusetts, U.S.A.). R.O.: 24 Bernard Street, Leith, Edinburgh.

J. L. MARSDEN (CHEMISTS), LTD. (P.C.).—Capital £100. To adopt an agreement made between Gosling Bros. Ltd. and James M. Marsden for the purpose of acquiring and carrying on the business of retail chemists and druggists carried on by that company, etc. Directors: James L. Marsden, M.P.S., and Merle V. Marsden, R.O.: 3 The Parade, Sudbury Heights Avenue, Greenford, Middlesex.

DALKIN (ROTHERHAM), LTD. (P.C.).—Capital £5,000, To carry on the business of manufacturers of and dealers in chemicals, medicines, etc. Directors: John Hinchliffe, M.P.S., Frank Lancashire and Ernest Shaw, 146 Morthen Way, Wickersley, director of Premier Launderettes (Yorkshire), Ltd., etc. Secretary: Ernest Shaw. Solicitors: Gichard & Co., Rotherham. R.O.: 42-43 Wellgate, Rotherham.

NORE PHARMACEUTICALS, LTD. (P.C.).—Capital £1,000. To carry on the business of manufacturers of and dealers in chemical, pharmaceuti-

cal, medical and industrial compounds and preparations, etc. The subscribers (each with one share) are:—Geoffrey E. Malyon, 8 Chester Road, Chigwell, Essex, accountant; and Geoffrey Golledge, 39 Downhall Road, Rayleigh, Essex, incorporated accountant. The first directors are not named, R.O.: 42 Welbeck Street, London, W.1.

Company News
Last year's figures in parentheses.

L. ROSE & CO., LTD.—Subject to formal agreement, negotiations have been completed for amalgamation of the company with Schweppes, Ltd.

G. B. KENT & SONS, LTD. — Group net profit for 1956 is £8,487 (£4,066) and dividend 93\} per cent. (same). Board considers results for current year should show "steady improvement."

#### **Voluntary Liquidations**

BRAKES & PARR, LTD., wholesale chemists, R.O.: 167 Upper Hanover Street, Sheffield, 3. Liquidator: Mr. P. Cardwell, 93 Queen Street, Sheffield, 1.

T. L. BELTON, LTD., chemists and druggists, 6 Little Russell Street, London, W.C.I. Liquidators: R. P. Booth, 14 Holborn Viaduct, London, E.C.I, and R. V. Bell, 5 Parsonage Gardens, Enfield, Middlesex.

#### **BUSINESS CHANGES**

LONG & STRICKLAND, LTD., 21 High Street, Bognor Regis, Sussex, has been acquired by Aston & Co., Ltd., 27 Montague Street, Worthing. The business continues to trade as Long & Strickland.

#### **Appointments**

BENGER LABORATORIES, LTD., Holmes Chapel, Cheshire, have appointed Dr. G. P. Ellis, B.Sc., F.R.I.C., head of the company's research team.

RADIOL CHEMICALS, LTD., have appointed Mr. G. Moser their representative in the Manchester area. Mr. Moser will also cover most of Yorkshire.

SOUTHALLS (BIRMINGHAM), LTD., have appointed Mr. J. N. Hillman (hitherto chief accountant), their secretary in place of Mr. T. Varley, who has resigned upon reaching retirement age.

BRITISH COD LIVER OILS (HULL & GRIMSBY), LTD., have appointed Mr. A. R. Benson, 58 St. Winifred's Road, Harrogate, Yorks (telephone: Harrogate 83210), their representative in the Northern Counties.

R. E. FRANZ, LTD., 73 High Holborn, London, W.C.1, have appointed Mr. A. W. R. Chandler manager of their chemical sales department. Until very recently, Mr. Chandler was sales manager of the fine chemicals department of Albright & Wilson, Ltd.

ARMOUR LABORATORIES, Hampden Park, Eastbourne, have appointed Miss M. McLaughlan, S.R.N., their representative for the promotion of the use of Armour ligatures and sutures to hospitals and the wholesale trade in Wales, the Midlands, and Eastern Counties.

#### **EXAMINATION** RESULTS

THE following candidates satisfied the examiners in the Intermediate examination held by the Pharmaceutical Society in England and Wales in

BAILEY, G. M., Hednesford; BAKER, A., Manchester; BANT, Marian I., Smethwick; Marchester, Bann, Martan B., Sincton, Martan Barlow, Edith, Cannock; Beale, E. W., Orpington; Bee, Barbara A., Leicester; BISSELL, Madge, Dudley; BLACKBURN, R. F., Southall; BOUNDS, G. S., Eastbourne; BOWLEY, J. T., Tunbridge Wells; BOWLEY, J. T., Tunbridge Wells; Brown, Bro BROOMBY, M. R. Llanfecnain; BROWN, D., Tonbridge; CARTER, A. C., Stourbridge; CULHAM, J. A., Parkstone; DAVIES, G. M., Llanelly; DAVIS, A. G., Hayes; DAVIS, M. R., Bournemouth; DAY, J. A., Swansea; DEANE, R. W. N., Tamworth; DIXON, C. L., Bangor; EILES, J. A., Welling; FINCH-THOMAS, A., Langley; FORD, J. W., Fulham; FORD, P. S., Burton-on-Trent; Fox, Jacqueline J., Bournemouth; Frost, Cicely J., Sutton Coldfield; Gibson, Patricia E., Newcastleon-Tyne; GOODMAN, I., Palmers Green; Goss, Jill M., Ipswich; Greenwood, Audrey, Burnley; Hadley, Victoria L., Birmingham; HILL, Barbara A., Plymouth; Hodder, D. E., Bournemouth; Hughes, W. K., Ogmore Vale; Jobling, Julia E., Burnley; Jones, Ann E. B., Aberystwyth; Jones, Janet E., Blackwood; Keeling, C. J., Derby; Kennedy, Ann J., Charlton; Kent, Marion J., Nottingham; Law, B. C., Stourport; Learner, L., Golders Green; Lerman, J., Bulawayo; Lewis, R., Stoke Newington; Lindsay, P. J. E., Cannock; Lloyd, F. H.. West Bromwich; LowE, J., Stokeon-Trent; MeAD, Anne E., Clacton-on-Sea; Millard, B. E., Ilford; Milne, Elsie M., Darwen; Muir, C. W., Liverpool; Mulholland, A. F., Liverpool; Muller, Yvonne D., Birmingham; Neal, E. T., Wealdstone; Nixon, Julie, Farnborough; Oshnowo, E. O., Holborn; Pannett, P. A., Hailsham; Paulin, R. J., Newbury; Pearman, Vanda M., Portslade; Phillips, Llinos J., Aberystwyth; Powell, Jill M., Stockbridge; Price, J. B., Merthyr-Tydfil; PUMFREY, J., Great Yarmouth; Purnell, B. A. C., Risca; Pyle, R. J., Exeter; Raine, J. A., Darwen; Ratchford, P., Stoke-on-Trent; Riley, B. B., Rochdale; Roberts, J. W., Whitchurch; RUSHWORTH, G. H., Shrewsbury; RUSHWORTH, V. J., Manchester; SHENTON, D. C., Godalming; SMYTH, R. W., Wallington; SPENCER, G., Burnley; STERN, M., Stoke Newington; ley; Stern, M., Stoke Newington; Stocks, A. B., Peterborough; Stroh, B. I., Clapton; Sutton, N. V., Frome; Swan, B. M., Maidstone; Tapley, Jean M., Chester; Taylor, J. C., Malmesbury; TEAL, G. M., Wellingborough; TEMPLE, M., Wellingborough; TEMPLE, W. A., Liverpool; THOMSON, J. S., Woolston; Ticehurst, Patricia E., Grays; Tier, P. G., West Worthing; Todd, Judith A., Burnley; Tucker, J. M., St. Helens; Vaughan, A. J., Greenford; Walpole, C. M., Cardiff; Watton, J. E., Westcliff-on-Sea; Wasley, Margaret A., Plymouth; Webb, D., Scunthorpe; Webb, D., Scunthorpe; Webb, M. Andower, Whitehurgeron, J. M. Markey, Margaret, Whitehurgeron, J. M. Markey, Margaret, Whitehurgeron, J. M. Markey, Margaret, M. Markey, M. Ma R., Andover; WHITTINGTON, J. M., Marston Moreteyne; WHITTINGTON, Rosemary A., Sutton Coldfield; WILKES, G., Crookham; WILKES, G., Wolverhampton; WILLIAMS, A., Swansea; WILLIAMS, R. I., N. Kensington; WILSON, Susan E., Liverpool; Wright, Jacqueline E., Birmingham.

#### Graduates in Pharmacy

THE examiners at Glasgow University have made the following awards:—
Degree of B.Sc. in Pharmacy, Second

Class Honours, Baillie, M. E.; Barr, T.; Dawson, L. L. M.; DINGWALL, D.; DUNCAN, J. G. C.; FRAME, E. A.; LIMOND. S. C.; NEWCOMBE, F.; O'NEILL, G. J.; Ross. S. S. Ordinary Degree, CRANSTON, H. S.; LAIRD, J. L.; MCPHAIL, R.; MAILER, M.; RANKINE, D. B.; SILVER, A.

#### **MARRIAGES**

HUNTER—MILLS. — At Standish Parish Church on July 10, Oliver Bryan Hunter, M.P.S., F.B.O.A., 44 Market Place, Wigan, Lancs, twin brother of Geoffrey L. Hunter, M.P.S., F.B.O.A., 125 Mesnes Road, Wigan, and a son of H. Hunter, M.P.S., 44 Market Place, Wigan, to Dozen Lore Mills Wigan, to Dorcen Joan Mills.

TOFT — WINKLE, — At Central Methodist Church, Burslem, Staffs, on June 29, George Arnold Toft, M.P.S., 36 Abbotts Drive, Hanley, Stoke-on-Trent, to Hilda Winkle, 6 Barnfield Road, Burslem.

#### **DEATHS**

FORD.—On July 2, Mr. Francis William Ford, M.P.S., 8 Brough Avenue, Bispham, Blackpool, Lancs, aged eighty-one. Mr. Ford was formerly in business at 189 Aston Road, Birming-

FYFE.—On July 12, Mr. John Henry Fyfe, M.P.S., Monkswood, Kilgraston Road, Edinburgh, 10. Mr. Fyfe qualified in 1899. He was formerly with Taylors Drug Co., Ltd., Stirling.

GLAVEY. - At 107 Greenlea Road, Terenure, Dublin, on July 7, Mr. Dermot Glavey, M.P.S.I. Mr. Glavey qualified as a licentiate of the Pharmaceutical Society of Ireland in 1933. He was appointed manufacturing chemist on the staff of Evans Sons, Lescher & Webb (Ireland), Ltd., in the same year and a year later became a director of the company. Since then until his re-cent illness he had been in charge of the manufacturing of pharmaceutical products including D.D.A. items. A man of quiet and kindly disposition Mr. Glavey was held in high esteem by his firm, now Evans Medical Supplies (Eire), Ltd., who closed their premises at Distillery Road as a mark of respect on the day of the interment. All sections of the staff were represented at the funeral.

MOCKLER.—At his home, Floraville, Thurles, co. Tipperary, on July 13, Mr. John Mockler, L.P.S.I. Mr. Mockler qualified as a licentiate of the Pharmaceutical Society of Ireland in 1911. He was one of the best known chemists in County Tipperary. For many years he had his own business in The Square, Thurles. As a young man Mr. Mockler was one of Tipperary's finest hurlers, and was a member the team that won the All-Ireland title for his native county in 1906 and

MORRIS.—On June 9, Mr. Ernest Morris, M.P.S., 9 Grove Road, Halton, Leeds. Mr. Morris qualified in 1916. He was in business at 7 Chapel Street, Leeds. He was a past chairman of the local branch of the National Pharmaceutical Union, a past chairman of the Leeds Branch of the Photographic Dealers' Association, and for many years a member of the Local Pharmaceutical Committee. He was a director of the joint companies P.D.S. (Leeds), Ltd., and P.A.S. (Yorks), Ltd.

ROCHE LYNCH.—(see C. & D., July 13, p. 34). At the cremation at Golders Green, London, on July 9, the Pharmaceutical Society was represented by Mr. D. W. Hudson (president) and Mr. F. W. Adams (a secretary and the registrar); the Proprietary Association of Great Britain was represented by Mr. B. A. Elliman (treasurer) and Mr. D. P. Hards (assistant secretary).

SALT. — At the Shanklin Cottage Hospital, Isle of Wight, on June 26, Mr. Leonard Thomas Salt, F.P.S., Clovelly, The Fairway, Sandown, Isle of Wight, aged seventy-six. Mr. Salt was in business at the Beachfield Pharmacy, High Street, Sandown, until he retired about eighteen years ago. He is survived by his widow.

#### LEGAL REPORT

#### A Director Gets an Interdict

AT Airdrie, Lanarks, on July 2, an interim interdict was granted preventing Whitten & Sharpe, chemists, Lunbeth Road. Coatbridge, Lanarks, from holding a meeting at which it was proposed to remove from the board one of the directors (Mr. William John Sharpe, Crowwood Crescent, Calderbank).

#### IN PARLIAMENT

#### By a Member of the Press Gallery, House of Commons

MR. J. K. VAUGHAN MORGAN (Parliamentary Secretary to the Ministry of Health) told Mr. A. Blenkinsop, in a written answer on July 8, that the Government was keeping a careful watch of any abuse of tranquillisers. On current information he was satisfied that existing measures were adequate at

#### Prescribing of Alcoholic Beverages

Mr. J. K. Vaughan Morgan (Parliamentary Secretary to the Ministry of Health) told SIR A. BOSSOM, in a written answer on July 10, that alcoholic beverages could be prescribed for individual patients in hospital as an item of diet where that was considered desirable on medical grounds. No cases had

come to the Minister's notice in which port wine had been prescribed.

#### Coronary Thrombosis and Smoking

MR. J. K. VAUGHAN MORGAN (Parliamentary Secretary to the Ministry of Health) told Mr. S. K. Cunningham, in a written answer on July 15, that he understood that the statistical correlation between smoking and coronary thrombosis had been suggested but not so far established.

The Thermal Insulation (Industrial Buildings) Bill was read a second time in the House of Lords on July 8.

The National Health Service Contributions Bill was read a third time in the House of Lords on July 4.

#### **NEW PRODUCTS AND PACKS**

Anti-hypertensive Agent. — At the British Medical Association's exhibition at Newcastle-upon-Tyne on July 15, Abbott Laboratories, Ltd., 3 Wadsworth Road, Perivale, Greenford, Middlesex, introduced a new hypertensive agent, Harmonyl, which they claim combines greater safety and more rapid onset of action with high potency. Harmonyl contains deserpidine, a new derivative of rauwolfia, which clinical reports have suggested causes significantly fewer and milder side effects than reserpine with which its effectiveness is comparable. Harmonyl is available in bottle of 100 grooved tablets of 0-25-mgm. each.

Chlorpromazine with Amylobarbitone. Pharmaceutical Specialities (May & Baker), Ltd., Dagenham, Essex, announce the introduction of Amargyl brand of chlorpromazine/amylobarbitone tablets, each containing 25 mgm. of chlorpromazine hydrochloride and 50 mgm. of amylobarbitone. The drugs in association are understood to bring about a considerable alleviation (or even symptomatic cure) in various states of anxiety and depression, and to render patients more amenable to psychotherapy. The effect of the chlorpromazine is to potentiate the action of the barbiturate, enabling its full clinical effect to be obtained with a reduced dosage. Amargyl is presented as lime-coloured sugar-coated tablets in containers of fifty and 500.



Counter-display outer, showcard and method of packaging in transparent cellulose film of Dietin capsules recently introduced by Trevena, Ltd., 3. London Wall Buildings, London, E.C.2 (see C. & D., July 6, p. 10).

Time-saving Baby Pants. — The new Marigold baby pants made by the J. Allen Rubber Co., Ltd., are described as labour saving, comfortable and completely waterproof. Fastening in the front with adjustable snap fasteners, the pants have flaps back and front for taking either disposable paper or conventional napkins which are folded and placed in the pockets. Marigold baby pants, in pink, blue or white, are made from an embossed plastic imported from Sweden and claimed not to harden or crack. All seams are welded to avoid any chance of chafing and to make washing easier and surer. The pants are sold in coloured box in small, medium, large and extra large sizes. As a guide to the customer in deciding the right size to buy when using paper napkins, the weight of the baby is given in lb. on the side of the pack.

Anti-Perspirant Deodorant, — Goya, Ltd., Badminton Court, Amersham, Bucks, are marketing a new anti-perspirant deodorant called Check. It is packed in a "push-up" case.

Sun-tan Oil. — Arthur H. Cox & Co., Ltd., Brighton, Sussex, are marketing a new sun-tan oil in 2-oz. bottle. Free sample and price are obtainable on application to the company.

Shaving Lotions, — Ronson Products, Ltd., 352 Strand, London, W.C.2, are marketing a new pre-shave and after-shave lotions. The pre-shave lotion



has been specially prepared for men who use dry shavers, a few drops rubbed on to the face being claimed to set up the beard for a smoother, more comfortable shave. The lotion also removes perspiration, making shaving easier in hot weather and hot climates. The after-shave lotion leaves the skin cool and refreshed whatever shaving method has been used. The lotions are currently being introduced by the company's representatives for delivery on August 1. Orders are being packed in display outers, each containing three bottles of pre-shave and three of after-shave lotions.

Feminine Version of Shaver.—The Ladyshave, the feminine version of the Philishave dry shaver of Philips Electrical, Ltd., Century House, Shaftesbury Avenue, London, W.C.2, is on the rotary-action principle. The housing is finished a delicate shade of pink



and is circular to fit snugly into the palm of the hand. A hair chamber automatically traps the hair after it has been removed.

#### TRADE NOTES

Additional Sizes.—Jeyes-Ibco Sales, Ltd., River Road, Barking, Essex, announce two additional bottle sizes (4-oz. and 8-oz.) of Jeyes fluid disinfectant.

Products Discontinued. — Glaxo Laboratories, Ltd., Greenford, Middlesex, announce that their 100-pack of Prepalin ampoules, 1 c.c., and penicillin ointment, B.P., are discontinued.

Now Also in Bottle. — Evan Williams Co., Ltd., Aintree Road, Perivale, Greenford, Middlesex, are issuing their Hi-Glo shampoo in a glass bottle (four shampoos). The new pack is in addition to the single-shampoo sachet.

Discontinued.—Ortho Pharmaceutical, Ltd., High Wycombe, Bucks, announce that Ortho dienœstrol cream in 1-oz. tube is being withdrawn on August 1. It will remain available in 80-gm. tube.

Now Prescribable. — Lactagol, Ltd., London Road, Mitcham, Surrey, announce that, at a recent meeting of the Standing Joint Committee on the Classification of Proprietary Medicines, silicone Vasogen was reclassified in categories 3 and 4, and therefore becomes prescribable on EC10 prescription forms.

Tan Without Burn. — The feature of two seasonably soothing preparations put out by Cupal, Ltd., Blackburn, "sooth tan" aerosol and cream, is that, in the words of the manufacturers, both products "not only prevent sun-burn but promote sun-tan." A showcard on which the cream and aerosol are simultaneous displayed is illustrated on p. 88.

Change of Distribution. — Amber Oils, Ltd., 11A Albemarle Street, London, W.1, announce that they have placed the world distribution of their pressurised dispenser products (Aerozene penetrating oil and spring lubricant; Blink invisible metal protector; and Rusolvent easing fluid) in the hands of Slip Products and Engineering Co., Ltd., 34 Great St. Helen's, London, E.C.3. Ambersil silicone mould-release and anti-stick agent, and Ruby industrial protective lacquer, continue to be handled by Messrs. Amber Oils.

#### **Bonus Offers**

RADIOL CHEMICALS, LTD., 78 Upper Richmond Road, London, S.W.15. 5 per cent. for display on direct £3 orders.

RONSON PRODUCTS, LTD., 352 Strand, London, W.C.2. Pre-shave and after-shave lotions. Twelve bottles for price of eleven. Additional 5 per cent. on order for six doz. or more. Till October 31

PETFOODS, LTD., Melton Mowbray, Leicestershire. Lassie, Chappie and Meet, 2s. 6d. extra profit voucher in each "3-ace" case containing twenty-four Lassie, twelve Chappie and twelve Meet.

TREVENA, LTD., 3 London Wall Buildings, London, E.C.2. Dietin multivitamin capsules. Twelve cartons charged as eleven.

#### INFORMATION WANTED

The Editor would appreciate information about the following:

MINSTER commode Kvein antigen



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TELEGRAMS: "CHEMICUS ESTRAND, LONDON"

#### **Educational Dilemmas**

In our correspondence columns this week a proprietor pharmacist describes, with a candour that can hardly fail to shock, how he handles inquirers for information on how to qualify in pharmacy. When they but ask for details he gives those without comment. But if they seek advice he counsels them that, for the effort they will have to put in, they will be better rewarded if they enter another profession.

In the early days of the Pharmaceutical Society such advice from such a source would have been unthinkable. Pharmacists then were proud of their calling and confident in its future. Sons were encouraged to go into fathers' businesses and newcomers were warmly welcomed into the fraternity.

The basic dilemma of pharmacy today is that while its educational standards advance its rewards recede or are under the threat of recession. That situation manifests itself in a variety of ways, and nobody knows—or is at all confident that he knows—how to meet it.

Possibly those who are in closest contact with the pharmaceutical service under the National Health Service are most aware of the unsolvable nature of the problem. Many of them once hankered after a livelihood made up of "pure" pharmacy, but were not long in business before finding out that if they attempted to achieve it they would condemn themselves to impossibly low standards of living. Their dilemma is that, while they are in favour, on general principles, of rising standards of education, they see less and less opportunity in the shop of applying the advances. They see the frustration of many young scientists when faced with commercial conditions, and fear that a growing shortage of young pharmacists to carry on the pharmaceutical work of N.H.S. will eventually lead to Government intervention and the creation of a new class of technicians with responsibilities that today are exclusively on the shoulders of pharmacists.

The dilemma of the educationists is rather different. They see pharmacy as a scientific discipline that cannot stand still but must go forward. They see pharmacy in line with the most advanced knowledge being applied in manufacture and, it may be, hospitals. Should they train all entrants to that level? Realism tells them that many graduates will not find employment in manufacture, and that if they should land up "in retail" they will either take kindly to it and throw away much of their science or seek to use their knowledge to the full and encounter frustration. Another kind of realism may tell them that, without financial assistance in the

form of Government or education-authority grants, many students cannot afford today to take up pharmacy, but that grants are not forthcoming for a course less than three years in duration. In that situation the educationists seem to have opted to maintain the flow of students.

Perhaps they are going to think out later what will happen to those students on qualifying or graduating. Or perhaps they see clearly the new and very different pharmaceutical set-up that will result from their recent decision and regard it as a desirable outcome. In the crazy, mixed-up profession that pharmacy is today the only fully shared view is that things will not go on as they are. Our correspondence columns this week reveal that recent silence on educational matters among ordinary members betokens no lack of interest in the subject. Far from it. We have been amazed at the response to our questionnaire. Fully to digest the answers may require a little time, but the general impression is of a resigned, pessimistic, even defeatist mood in the profession.

At this point a clear statement of objectives by the educational policy subcommittee would be studied almost with the eagerness of a drowning man clutching at a straw. He might find, with some dismay, that it led on to rescue on a vessel going north when his previous course was south, but anything is better than to drown in a sea of ignorance. If the subcommittee and the Council see no future in practice in shops, but only for "pure" pharmacy in manufacture, hospitals and unborn health centres, they should say so. The suspicion is that that is what they believe, but that they dare not let it be known among the members of the Society as a whole, since so many of them are on the retail side and might be hostile.

Meanwhile, despite well-meant advice to look elsewhere, students are continuing, so far, to enter pharmacy. On other pages we set out the information essential in helping them to do so, with only the warning to waste no time in passing the examinations, because if they draw it out too long they may find themselves working to a different set of rules.

#### A Strategic Gain

BRITISH pharmacists may perhaps permit themselves to rejoice with their Irish colleagues at the outcome of the Fair Trade Commission's inquiry into trade conditions in pharmacy in the Republic of Ireland in 1954–55. The Commission's report (C. & D., July 13, p. 31) contains a statement that may prove of importance to pharmacists even outside the boundaries of the Irish Republic. The Commission goes on record as believing that there is a need to confine "medicines other than poisons" to qualified chemists, because of the nature and composition of many modern medicinal preparations.

In Britain the Chemists Federation is one of the first organisations under investigation by the Restrictive Trade Practices Court. For the Federation to be able to quote the opinion of so high an authority as the Irish Fair Trade Commission in support of its policies is a valuable asset that no doubt will be fully exploited.

HARVEY PORTRAITS: Through the courtesy of Ciba Laboratories, Ltd., Horsham, Sussex, a limited number of copies of the full-page colour portrait of William Harvey which appeared in The CHEMIST AND DRUGGIST Annual Special Issue (June 29, p. 725) are available on request.

## Correspondence

Letters when received must bear the name and address of the sender, not necessarily for publication. The Editor does not hold himself responsible for the views expressed.

#### **Under-cutting?**

SIR,—I wish to draw your attention to a serious matter that has arisen in connection with the supply of first-aid equipment under the Agricultural (First Aid) Regulations, 1957. The July issue of the East Sussex Farmers' Union Journal states that a surgical dressing manufacturer is being approached to supply Government regulation first-aid kits to its members at reduced rates. That action constitutes a grave threat to our livelihood, and serious undercutting of normal and reasonable prices. I have sent the details to the National Pharmaceutical Union for their attention, and appeal to you to help resist this development which, if extended, would become dangerous.

Herstmonceux

A. W. Dobbs

#### Wanted: Old Pill Boxes

SIR,—I am trying to amplify information we have about the early days of this company, which started in 1839 as pill-box manufacturers in the once familiar pink-and-white style, followed by rigid square boxes and almost at the same time by wooden chip boxes, commencing a year or two later the manufacture of turned wood boxes. I am trying to get hold of some samples of those turned wooden boxes and of old willow chip boxes; it may be that chemists, especially the older ones, may have stocks of them still on their shelves. We would much appreciate the help of any such who would otherwise one day be throwing them away as useless.

PHILIP M. ROBINSON, Director

Robinson & Sons, Ltd., Wheat Bridge Mills, Chesterfield

#### Jack of All Trades

SIR,—One of your correspondents referred to Service officers in the Royal Army Medical Corps as "Jacks of all trades." They have to be! The Services demand these qualifications from all officers of any rank:—(1) Intelligence and practical ability to organise and control staffs (pay, clothing, accommodation, training, discipline). (2) Appreciation of the situation: The ability to sum up all pros and cons, and act with prompt obedience of orders from higher command under all conditions of fire, pestilence, famine, sudden death, peace or war. (3) To carry out all orders without question, and when necessary—if a senior officer is killed or wounded, or sick—to take over immediate control. A newly-fledged pharmacist who only just knows his A.B.C. of administration has much to learn before he can carry out the duties of an officer. The Pharmaceutical Society should consider ex-Service officers, warrant officers and sergeant-dispensers for registration as "qualified National Health Service technicians."

COMMISSIONED

#### Rates of Pay

SIR,—The letter from Elderly Pharmacist (C. & D., June 29, p. 692) complaining of retail rates of pay and shortage of labour, prompts me to write that I am a qualified assistant of the Pharmaceutical Society of Ireland with twenty years' experience in pharmacy (retail and wholesale). My qualification entitles me to cover and manage a shop in the absence of the pharmacist proprietor. In fact I am at the moment doing a month's "locum" in a busy pharmacy with control of a counter staff of four. I have booked similar "locums" until September. Two years ago I took a position with a prominent London firm. I was offered 161s. per week as a dispenser. A Middlesbrough wholesaler offered me 180s. per week, out of which I had to pay income tax. I stayed three months with the London firm, but left naturally when I was ready. My successor (at the same rate) was an ex-private from the Royal Army Medical Corps, who had just returned from Hong Kong. Now every time I read of a labour shortage in the phar-maceutical profession in England, I laugh my head off, I am anxious to work in England, but not when I see young Australians of both sexes getting fabulous salaries (and they still wet behind the ears!) while experience is worth £8 1s. per week. Incidentally, the London job is always open for me, if I care to go back.

Dublin, Eire T. P. WALKER

#### Status and Responsibility

SIR.—I heartily agree with Mr. E. J. Taylor, Sidcup, in his remarks (C. & D., July 13, p. 38) on "The Status of a Pharmacist." In every town far too many unqualified assistants are now carrying much too much responsibility without adequate remuneration or recognition. We certainly do "need to put our own house in order" if we are to earn the position we should hold as legally qualified pharmacists and "men of some legal standing." Adulterated drugs or substitution of products would be beguite survived. ducts would be heavily punished in law-and rightly so. Adulterated pharmacy (an unqualified assistant in hospital, warehouse or retail pharmacy doing nearly all the dispensing or the handling and distribution of D.D.A. and S.4 preparations) should be similarly penalised. In practice few large hospitals have an adequate number of pharmacists to supervise the work done in the dispensary. Few big whole-sale distributors of D.D.A. and S.4 pro-prietaries, so-called "ethicals," and poisonous drugs have more than one pharmacist on the premises. Even in many large retail pharmacies with big N.H.S. and private dispensing practices not more than one pharmacist is employed. So long as one certificate of membership of the Pharmaceutical Society hangs somewhere in a conspicuous position for our inspectors, the Home Office caller, and in-

surance officials to see, all is satisfactory from a legal point of view. But is it morally right?

REFORMIST

#### **Advertising IS Controlled**

SIR, — Your correspondent "Concerned" (C. & D., July 13, p. 38) is perfectly right in contending that everything should be done to maintain the highest standards in advertising medicinal products to the public. Happily, the situation is not quite as bleak as his letter suggests. Elaborate machinery already exists for controlling the advertising of such commodities. It takes the form of the "British Code of Standards in relation to the Advertising of Medicines and Treatments," which has the support of newspaper and magazine associations, various official advertising bodies, and of the manufacturers themselves. The Code lays down quite definitely a pattern of conduct for advertisers of popular medicines and treatments. Although, like any other set of rules, it needs to be amended from time to time, the Code has served the public well over the years and is, in the main, faithfully followed by advertisers and their agents. Enforcement of the Code is the joint responsibility of all the bodies referred to. In practice, the enforcement system works successfully, though no one could deny that, in the highspeed life of the publishing world, an occasional advertisement may slip into print in a form that may be below standard. When such cases are brought to the notice of the advertiser there is usually a readiness to remedy the wrong. Where, however, an advertiser persists in contravening the Code, effective measures can be taken for boycotting his advertising. In addition to the above system of control, constant vigilance is exercised by the Advertising Investigation Department of the Advertising Association—a body whose sphere of influence in the cause of good behaviour in advertising is indeed far-reaching. The Association is ready at all times to deal with specific complaints about advertisements, whether for medicinal, cosmetic or any other product or service. Whatever imperfections may exist in the present British system of controlling advertise-ments, one thing is certain—it is far more satisfactory to all parties con-cerned than any form of control that could be set up by legislation, no mat-ter how desirable that may appear to

be in other countries.

London, W.1 L. B. SINGLETON

#### Appreciated

CONGRATULATIONS on your excellent presentation of news, informative articles, candid comments, photographic reproductions and every item of general interest to the pharmacist which goes to make the C. & D., such an outstanding trade and professional journal.—

J.R.D.

#### A "BED'S EYE" VIEW OF RETAIL PHARMACY

## Unrealistic Limits in Education

BY COMMITTEE MEMBER

TEMPORARY interruption of one's business activities ending in a convalescence in bed offers to the philosophic pharmacist an excellent opportunity of reviewing his own position and of casting an eye over the wider sphere of general pharmacy—political, professional and commercial.

The practice of pharmacy is a craft, involving the application of knowledge, the practice of an acquired skill, and the translation of experience of the past into present action. The Greek word PHARMAKON means, simply, a drug, and the drug is the fundamental basis on which our pro-

fession has been built up.

Through all the past history of the druggists the essential core of their operations was knowledge of the characters of drugs, and the uses of the drugs when applied to the relief and cure of human ailments. Over the ages we seem to have gathered to ourselves a quantity of extraneous matters as a ship gathers barnacles. Those impede progress, and at intervals there must be a scouring and cleansing, so that future progress may be once again smooth, rapid and true to course.

From my bedside I look back over many years in retail pharmacy. I was familiar with the original stock on which the National Health Insurance slip was grafted. My business is an ordinary good-class one, reasonably easy to work, profitable up to a point, with the average number of EC10's—or their earlier equivalent—forthcoming from the average number of local doctors. Before becoming a proprietor I had had a varied experience in widely different pharmacies as assistant and locum. I have held office in my local Association, and have represented my Branch at national conferences.

Against that average background I have been passing in review the various sections and phases of present-day retail pharmacy, aided by a refresher course consisting of a leisurely reperusal of back numbers of the C. & D. As a result two questions insist on intruding themselves into my quiet philosophic mood. Where, exactly, do we stand today? Where, exactly, are we going on to tomorrow?

Throughout the country there are thousands of chemists' shops at which millions of National Health Service prescriptions are dispensed and at which much other retail business is carried on. Perhaps in a rough and ready way it is possible to analyse the character of that business.

Because the making of medicines was the basis of the old apothecary's craft and the chemists and druggists carried that skill with them when they established themselves independently, it was natural that allied activities sprang up that were incorporated into the business of the chemist. Herbs and spices, naturally, followed because of the druggist's "grocer" ancestry. Homely domestic remedies, packed to meet a future need rather than a present emergency, seemed only a prudent provision, and surgical sundries and appliances grew into the business as a matter of course. The gradual emergence of more refined cosmetic preparations was also a consequence of dealing with drugs and, when home photography became popular, it was again the familiarity of the chemist and druggist with chemicals and allied sundries that made it reasonable for him to develop that new "side-line."

Yet all the time he carried on his main work of compounding medicines and interpreting doctors' prescriptions, until in 1911, when the first N.H.I. Act was passed, the average chemist's shop held a varied collection of associated commodities, widely differing between one place and another in their proportion to the total but generally with a hard core of pharmaceutical compounding that depended on the proprietor's knowledge, training and skill for its successful operation. Continuity in the conduct of the retail business was assured because apprentices in reasonable numbers came, acquired practical knowledge, and passed on to assistantships and final qualification. From that point they generally continued as assistants, locums and managers until finally launching out, if possible, as proprietors in retail businesses of their own.

#### Present-day Picture

During the past forty-five years important changes have taken place, N.H.I. and N.H.S. have each exercised a profound influence on the practice of pharmacy, in both the retail and the manufacturing spheres, Educational standards have been considerably raised. Industry has seized its own opportunities, and has developed on a large scale. The dispensing counter of the retail shop presents today a very different picture from that of fifty years ago.

It has been repeatedly stated that N.H.S. dispensing represents only about one-third of the business of the average chemist's shop. Of that N.H.S. business about 40 per cent. now consists of distributing proprietary packages. At a rough estimate the toilet and cosmetic section could probably in many shops be counted as another third, while the remainder may be divided between domestic, photo-

graphic and surgical requirements.

Every proprietor, of course, knows his own business best, and must assess for himself what proportion of his turnover results from each particular section. On the whole, I question whether there are many—if any—retail businesses in the country which draw their sole income from purely professional activities. I recognise, however, that there may be many which have a medical connection and professional practice responsible for as much as two-thirds of the total business. I imagine them to be in a minority.

That is the picture as I sec it today. What about tomorrow? At this stage I think it would be appropriate to look through the big window in Bloomsbury Square and consider the proceedings in the Council Chamber. For some years I have felt a certain satisfaction that several members of the N.P.U. Executive had secured seats on the Pharmaceutical Council. We have had, indeed, a series of presidents who, in their everyday life, have been "general practitioners" (as the phrase now goes) in pharmacy.

Of late years we have seen the abolition of the Chemist and Druggist Qualifying examination and concentration on the higher standard of the Pharmaceutical Chemist diploma. More and more universities have instituted courses for degrees in pharmacy. More pupils from secondary schools have proceeded to universities for further education. At the crossways many more pharmacy students have chosen the degree road rather than the diploma road to qualification, and we now have more and more graduates in pharmacy leaving their university with a high degree of scientific theory but little practical experience of the commercial application of their pharmaceutical knowledge. It is the Council's declared policy to encourage phar-

at is the Council's declared policy to encourage pharmacy students to choose the degree rather than the diploma route, although they know well that each year an increasing number of graduates do not register, and their services, therefore, are lost to retail pharmacy. How can

pharmacists engaged in retail practice explain that entirely unrealistic attitude of their Bloomsbury representatives in approaching the vital question of the continuity of retail service? The questions were discussed in detail at a Southern Regional conference at Southampton some months ago (C. & D., December 15, 1956, pp. 654-56). I appreciate all that is said about maintaining professional ideals. I recognise that the practice of pharmacy is of one kind only -that, in Mr. Maplethorpe's words, we must look at pharmacy as one complete whole and that everybody should have the same basic training. But I beg leave to question the implications of his statement, on the same occasion, that a lot of degree students are already in shops, and that there is no reason why they should not find the work congenial. The value of that statement depends on what "a lot" represents. It would be more informative, and certainly more accurate, if the quantity were stated as a percentage of the total number of qualified men engaged as assistants in retail shops.

Let us turn back for a moment to figures previously quoted, and assume that N.H.S. work is one-third of my total business, and let us remember that 40 per cent, of that third represents proprietary prescriptions. Perhaps the Government and National Pharmaceutical Union accountants could spare the time from their lengthy joint discussions about my remuneration to calculate for me how big my business needs to be in order that professional dispensing, and jobs at the dispensing counter are sufficiently attractive to a graduate pharmacist, and sufficiently important to me, to warrant my paying him £20 a week and upwards for doing them while I devote my energies to the other two-thirds of my business at the selling counter. I can assure them both that my own business is not as big as that, and I think I may safely assure Mr. Maplethorpe that the retail businesses in the country in which the volume of professional work undertaken is sufficient to make it congenial to the scientifically inclined Bachelor of Pharmacy are by no means in the majority.

#### Pharmacy's Scientific Future

For myself, I confess, I cannot—without making a certain assumption—understand the action of the Pharmaceutical Society's Council in pressing forward with its plans for higher education. Particularly am I at a loss to understand the acquiescence in those plans of certain practising retail pharmacist members who, I assume, depend on their businesses for their income and whose advent to the Council Chamber I have previously welcomed. My assumption is that the Council and permanent officers of the Society have in view the ultimate establishment of a practice of pharmacy from which all taint of commercialism has been eliminated.

In the scientific society that is visualised, corner-shop retail chaffering will not be becoming conduct for its academically trained members. In the sterilised atmosphere of the ethical pharmaceutical department an order for three-pennyworth of oil of almonds and syrup of violets would be an affront. A request for an ounce of Trooper's ointment might be considered an unwarrantable intrusion. And yet, I suppose, those original founders of our Society, who attended that historic meeting at The Crown and Anchor tavern on April 15, 1841, trained their apprentices in the compounding of those and many similar—and in those days popular—pharmaceutical preparations and were well pleased with their labours in the cause of youth if ultimately those pupils successfully negotiated the Chemist and Druggist Qualifying examination or its equivalent.

At the present time pharmacists with good businesses have considerable difficulty in securing the services of qualified assistants. Elderly pharmacists, anxious to sell their businesses and retire cannot find younger men willing to shoulder the responsibility of personal ownership. Branch representatives have frequently referred to those matters. N.P.U. delegates have discussed them at length. If that is

so now, the position must become progressively more acute during the next ten years, because of the lack of qualified pharmacists willing to enter retail business. Unless some steps are taken to relieve the present acute situation, private proprietorship in small shops, as we know it now, may be eliminated. As one important consequence, points of supply for National Health Service medicines must become fewer in number.

If no effectual action to modify that trend is taken by the Pharmaceutical Society some body outside the profession may enter the field. The Government has considerable interests in these matters and cannot neglect them. I even make the suggestion that the Ministry of Health, the Home Office and the Service Departments might between them evolve a scheme to train and examine suitable candidates who could become sufficiently proficient in the handling of drugs and medicines to operate, under certain key supervisory officers, a pharmaceutical service that would meet all the ordinary requirements of civilian and Service patients. Just as hospitals now stand behind general practitioners to deal with serious cases, central pharmaceutical clinics could be established to supplement the service provided by the general practitioners in pharmacy.

Perhaps a continuing high temperature is making me myopic—or should it be misanthropic? But that, at least, is my bed's-eye view of the way pharmacy will develop—largely, I think, as a result of the present operations of our Pharmaceutical Council. What has persuaded ordinary members to accept those educational proposals in present-day conditions? Let me briefly summarise those conditions again. The majority of pharmacists on the register are engaged in retail business. They depend for their livelihood on retail trade.

How does it come about, then, that the Council's academic aspirations have been carried into effect with such little opposition from those practical minded members whose interests will be most affected? My guess is that the protagonists of the change have taken advantage of the fact that, during recent years chemist contractors—who constitute such a large proportion of members of the Society—have been inordinately preoccupied with considering decimally differing allowances for containers and corks; with calculating the total value to themselves of the addition of such sums as a penny-farthing to the cost of each prescription they dispense.

#### **NEW BOOKS**

#### Medicinal Chemistry, Vol. III

F. F. BLICKE AND R. H. COX. Chapman & Hall, Ltd., 37 Essex Street, London, W.C.2. 9 x 6 in. Pp. viii plus 346. 84s.

The volume continues the series of reviews prepared under the auspices of the division of medical chemistry, American Chemical Society. It takes in four. Methadone and related analgesics are reviewed by T. P. Carney; quaternary ammonium compounds by Peter L. de Benneville; non-mercurial diuretics by Viktor Papesch and Elmer F. Schroider; and synthetic analogues of physostigmine by Arthur Stempel and John A. Aeschlimann.

#### **Determination of Organic Compounds**

K. G. STONE. McGraw-Hill Publishing Co., Ltd., 95 Farringdon Street, London, E.C.4. 9 x 6 in. Pp. v plus 233. 37s. 6d.

The aim of the author, who is an associate professor of chemistry at Michigan State University, has been to give an introduction to the ideas that underly analytical methods as applied to organic compounds; to promote system in applying those ideas; to demonstrate that the method used is influenced by the amount of material available; and to provide limited laboratory experience, "preferably using techniques which are not in the realm of past experience." The scope of the methods is kept broad. There are chapters on alcohols; aldehydes and ketones; carboxylic acids and derivatives, phenols, nitro compounds, amines, sulphurcontaining compounds and various group determinations.

## A School that Looks to the Future

IN A NEW AND SPACIOUS HOME AND WITH AN

ABUNDANCE OF NEW EQUIPMENT, THE SCHOOL

OF PHARMACY, BRISTOL, IS TAKING ON A CHARACTER

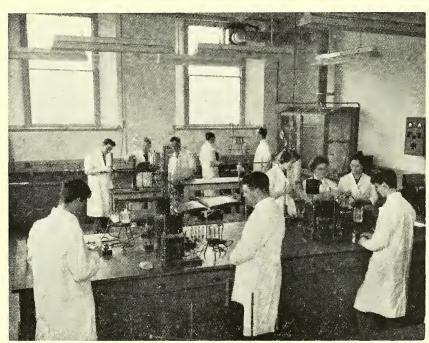
OF ITS OWN THAT MAY MAKE IT UNIQUE

AMONG PHARMACEUTICAL TRAINING INSTITUTIONS

URING most of the period of eight years that has elapsed since the local authority in the City and County of Bristol took over from private hands the responsibility for pharmaceutical education in the city, the school of pharmacy continued to reflect its origins and early development.

The city did not originate the school but acquired it from a neighbour. It was born and grew up in the sister city of Bath in 1907 as the Bath and West School of Pharmacy. Like most of the early training institutions in pharmacy, the school was a commercial venture, and though, under its founder (the late Mr. D. J. Williams, Ph.C.) it never became one of the largest of its kind, it achieved a proud record of successes and was held in high esteem by its students, both in their years of training and in their later years as practising pharmacists.

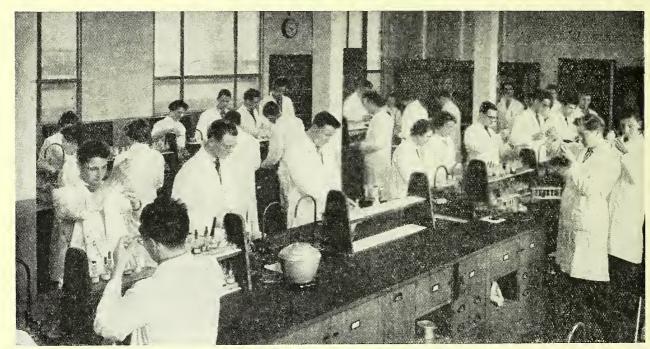
Again like the other "profit-making" schools, the Bath and West came up against the changing outlook on pharmaceutical training that caused each in turn either to cease functioning or to be taken over by a technical college or university. The municipality of Bath, however, either did not want to take over or did not feel herself large enough to support a school of pharmacy, so Mr. Williams entered into negotiations with the Merchant Venturers' Technical College in Bristol, the commercial capital of the West and only twelve miles away. The negotiations led to the take-over of the School in 1929, and its transfer to Bristol, where for twenty years the School, largely with the same staff, flourished at premises of the Merchant Venturers in Unity Street. In 1949 the School was absorbed into the technical education of the City, whose educational authorities were not content that the school should remain static. A big programme of expansion in the facilities for technical education within the City was projected, which of course had to be held in abeyance during the 1939-45 war. Bristol's central area in those years



The physiology laboratory, Apparatus includes a standard Palmer kymograph and recording spirometer. At right may be seen on wall the a.c./d.c. rectifier,



A group of students at work in the dispensary. In the background behind the partition is a dry galenicals laboratory.



Above: Students at work in the chemistry laboratory. There are places for forty students. Between each pair are compact arrangements of cubby holes and drawers for apparatus, some of it individual to each student, the remainder shared. Below, right, the aseptic laboratory, with its dust-free surfaces and flush lighting.

suffered exceptional damage by enemy action, but afterwards a unique opportunity presented itself to bring together and enlarge the departments of the College of Technology. The famous Müller Orphanage came into the market. Under the Welfare State that institution, if not redundant, called for much smaller premises, and its group of four massively built blocks at Ashley Down, overlooking Bristol's County Cricket ground, was acquired by the City. In one of them [Humphrey] Davy House, the school of pharmacy finds its new home (by coincidence or intention the four houses, named after famous Bristolians, are in alphabetical sequence: Allen, Brunel, Cabot and Davy).

The building may be said to have adapted itself extremely well to a purpose so different from its original use. The structure is of proportions far more generous than in the economic conditions of today would be practicable. The walls, to give but one example, are immensely thick. The ceilings almost excessively lofty, and most of the rooms large enough, after adaptation, to give more than ample space per student, whether in the lecture rooms or at the laboratory bench for practical work. The floors, admittedly, were not all they might be and some have had to be, others



may require to be, renewed in the not distant future. But as the whole of the pharmacy department is on the ground floor, the school has come off rather better in that respect than some of the other departments. Windows in the building were large and numerous, with only the curious







Left: Scrubbing-up room with electronic hand-drying apparatus. Centre, air filtration and pressure plant for supplying a sterile atmosphere at positive pressure to the laboratory below. Right: A separate balance room enables the right conditions for accurate weighing to be maintained and psychologically establishes the importance of the weighing operation in the student's work.

feature that they are set unusually high—intentionally so if the theory is correct that they were set that way so that the minds of the orphan inmates should not be distracted by sights of the outside world. Heating was a major problem of the transformation, because the former young occupants were brought up to a Spartan life, with artificial warmth at ground-floor level only. But two large boilers installed at the rear of the building have taken care of that problem and the present occupants are not likely to find their work hampered by numb fingers in wintry weather.

The pharmacy department, whose total area is 58,000 sq. ft., comprises a long series of rooms opening from a corridor which, at about half way, takes a "side step." From one arm the rooms open out to the north and from the other to the south. Along one are laboratories for physiology and pharmacognosy, remarkable chiefly for their spaciousness, a chemistry laboratory and a lecture theatre. With each main laboratory for the students is associated a smaller laboratory for research. Equipment of the physiology laboratory includes a capacious refrigerator; a.c./d.c. rectifier; and Palmer kymograph unit with respiration unit, a.c. time clock and mounting table.

Also in the physiology department are a recording spirometer, centrifuge and animal operating theatre with heated

and drained slab.

The pharmacology laboratory houses one of the few fixtures brought from Unity Street—a set of specimen-recognition drawers with a fall-down front. A greenhouse attached to the department is intended later to be fully used for the cultivation of plants of interest from a pharmaceutical point of view, and a quarter-acre of ground is planned to be used as a botanical garden.

#### Semi-micro Chemistry

In the pharmaceutical chemistry laboratory the students are trained to work with small quantities. Besides compelling extreme care if accurate results are to be obtained, the method enables special apparatus to be used, affording a great saving of time. An example is the electrical bench-top heater which each two students share, and which, without needing to be watched, brings the test-tubes in its sockets quickly to the required temperature under thermostatic control. Of the three benches running virtually the length of the room one has an asbestos top.

Along the corridor in this part of the department are a series of display windows set into the wall and used to familiarise the student with the proprietary forms in which he will, after qualifying, encounter the drugs he would otherwise know only as powders or liquids (assuming he

handles them at all).

Along the other arm of the corridor are the dispensary, dry and wet galenical laboratories, pharmaceutics research laboratory, aseptic laboratory, media kitchen and stores.

The dispensary is well equipped, and attractively arranged. The white dispensing balances give a clean, professional air to the working benches, and the equipment includes stainless Sankey autoclaves, hot-air ovens and a continuous still, mounted on slotted-angle frames, for providing all the distilled water needed for use in the dispensary. One piece of furniture that is both useful and ornamental is a label fitment brought from the old Unity Street premises. Otherwise all is new. The pharmaceutics research laboratory is well provided both with standard apparatus and miniatures of manufacturing-scale plant.

A department that strongly exemplifies the forward look of the school is the sterile laboratory, with attendant air-conditioning system. The laboratory, illustrated on p. 68, has ten benches, with as many sterile covers of transparent plastic for use in particular operations, and one sink with arm-operated tap for each pair. Lighting is through flush glass panels in a false ceiling, in which also are air ducts through which comes the filtered air from the plant above—twenty-five changes of atmosphere an hour and a positive pressure 10 m.m. above atmospheric. In one wall is a flush

panel which, in emergency, can be pushed out to give access to a corridor. Otherwise entrance and exit is by way of a scrubbing-up room with wash basins along one wall and electronically operated hand-drying machine on the other, eliminating the septic risks of towels.

In the elbow of the corridor is a lecture room (other lecture rooms on higher floors are shared with other departments of the College), and the office of the head of department, Mr. D. A. Norton, B.Sc., F.P.S., D.B.A., A.C.T. (Birm.). Mr. Norton, without making any break with the past, has planned the department so that in future the training it gives to its students may have the more scientific and less empirical basis that is more in line with current tendencies in pharmaceutical education. By the same token the students enrolled, who now all study for the Society's diploma, will probably include each year a growing number of degree students. The subject of pharmacy holds a high place among the subjects in which instruction is given at the College, and proposals for expansion and development are likely to receive sympathetic consideration, especially as the principal of the College, Mr. G. H. Moore, M.Sc., F.R.I.C., is himself a Fellow of the Pharmaceutical Society. A former principal (Mr. W. Cooper, F.P.S.), who is also the president of the Old Students' Association, played a major part in the planning of the new school, though he retired before the move from Unity Street took place.

The line of future development of the school is to be discerned in the use which is to be made of outbuildings and grounds. An existing single-storey building is being adapted to become an animal house (for biological test animals). Three cubicles have been given concrete floors, sloped for rapid drainage, and a system of thermostatically controlled heating. The intention is to develop pharmacology as a subject in which students do a good deal of practical work, perhaps in the future as part of their work for an honours

degree in pharmacy.

The teaching staff of the school comprises the head and six lecturers. There are also a number of technicians attached solely to the department. Some of the training is given within the departments of chemistry and biology and of physics, each with its own teaching staffs.

A D. J. Williams bursary fund, set up to perpetuate the name of the founder of the "Bristol and West" provides a fund to encourage research in pharmacognosy (it is administered by the local Branch of the Pharmaceutical Society), and three medals and four prizes are awarded each session as course or subject prizes. The Students' Union is active throughout the College, and the school has its own pharmacy students' association. There is a Bath and Bristol Schools of Pharmacy Old Students' Association.

## A PHARMACIST'S ANTHOLOGY THE CAUTIOUS CHEMIST

From The Towers of Trebizond, by Rose Macaulay I LOOKED at aunt Dot's things, to see what she had taken with her. Her miscellaneous collection of medicine bottles was here; it was a largish collection, because she did not know what most of them were, or for what complaints, on account of chemists not caring to say more on the labels than "The Pills," "The Tablets," "The Mixture," and other non-committal titles, so aunt Dot took a great many of these anonymous bottles about with her on her travels and ate and drank them at random when she ailed. She always said this anonymity was owing to chemists not being able to read the handwriting of the doctors who wrote the prescriptions, or understand the abbreviations of the Latin words used, so that they did not know whether they were making up the things prescribed or another set of things altogether, and thought it better that the labels should be non-committal. I once asked a doctor why he did not write better, and also in English, and put the words in full. He said that the patient might in that case understand it which would not do. Chemists, too, think that this would not do, and that if a patient knew what he was taking it might even prove fatal, because of nerves, and the name of the remedy might make him guess what

illness he had, which would prove still more fatal. . . .

## **QUALIFYING IN PHARMACY**

#### Requirements current until 1958, and some notes on impending changes

INFORMATION ON FURTHER STUDY AND ALLIED PROFESSIONS

TO qualify as a pharmacist in Britain it is necessary either to pass the Pharmaceutical Society's Qualifying examination or to take a University degree in pharmacy followed by the Society's examination in forensic pharmacy. period of practical training is also obligatory. At present that may be either a period of two years before taking the two-year Qualifying examination course or a period of one year after taking the course. Graduates in pharmacy are required to perform one year's practical training before registration as a pharmacist.

A student who wishes to qualify as a pharmacist by way of the Society's examination must first register with the Society as a student. The educational requirements for registration are being raised from March 1, 1958 and students registration from that does not be a see that registering from that date too, are being required to take a three-year course of training for the Pharmaceutical Chemist Qualifying examination as against the present two-year course.

Up to February 28, 1958, for regi-

stration as a student a candidate must produce to the registrar of the Pharmaceutical Society evidence that he has reached a certain standard of general education. He must hold (a) the General Certificate of Education at ordinary or advanced level in English and mathematics and three other subjects passed at one sitting, or four other subjects at two sittings; or (b) the London Matriculation certificate or (c) in Scotland, the Leaving Certificate in English, mathematics and three other subjects. The registration fee is £4 4s. The registered student must then study (usually three terms full time) for the Pharmaccutical Society's Intermediate examination in chemistry, physics and biology. The fee for entry to the examination is £9 9s. and for re-entry £3 3s. for any one subject. A student who has gained the General Certificate of Education at advanced level and has passed in those three subjects at not more than two sittings, is granted exemption from the Intermediate examin-

After the Intermediate examination, the student may elect to do his practical training, which may be undertaken either at that stage or after passing the Qualifying examination. If taken before the examination, the training occupies two years and is undertaken under articles of pupilage in a retail pharmacy, hospital or manufacturing laboratory (which in any case must be approved by the Pharmaceutical Society for the purpose); if taken afterwards, one year's purpose), it taken afterwards, one year's practical training is accepted, and articles of pupilage are not required. The training need not be all in one place. It is at present still permissible for the practical training to be taken immediately on leaving school, before the Intermediate examination.

After passing the Intermediate examination, and perhaps taking his practical training, the student enters upon another academic course of two full-time sessions of three terms each, in an institution approved by the Pharmaceutical Society for the purpose, for the Society's Qualifying examination. The six subjects of the examination are pharmacognosy, pharmaceutics, physiology and pharmacology, pharmaceutical chemistry, and forensic pharmacy. The fee for entry to the examination is £15 15s., and for re-entry in two referred subjects, £10 10s. or one referred subject, £6 6s. A candidate who has passed the Qualifying examination and completed his course of practical training, is entitled to registration as a pharmaceutical chemist if he has reached the age of twenty-one.

The register of pharmaceutical chemists is maintained by the Pharmaceutical Society as a statutory obligation. The fee for registration of a person the beautiful the fee for registration of a person the beautiful the feet of the feet who has satisfied the foregoing condition is £2 2s. if paid during the first six months of the year, or £1 1s. in the second six months. An annual fee of £3 13s. 6d. is payable thereafter, for the retention of his name on the regi-

From March 1, 1958, for registration as a "student" an applicant must produce to the registrar of the Pharmaceutical Society evidence that he has passed the General Certificate of Education examination of any of the examining bodies included in the Appendix below either: (i) In five subjects as follows: (a) English language; (b) a language other than English; (c) mathematics; (d) two other subjects. (Two matics; (d) two other subjects. (I wo subjects must have been passed at advanced level, and one subject at ordinary level, on one and the same occasion); or (ii) in six subjects (not necessarily passed on the same occasion) as follows: (a) English language; (b) a language other than English; (c) mathematics; (d) three other subjects. (Two subjects must have been passed at advanced level.) Provided also in either case that unless chemistry, physics and biology have been passed at advanced level in the G.C.E. examination, the applicant must have passed the Society's Entrance examination in any of the subjects chemistry, physics and biology not passed at advanced level in the G.C.E. examination.\* Alternatively the applicant must show that he has passed the Leaving Certificate examination of the Scottish Department, or the Scottish Universities Preliminary examination, provided in either case that the applicant has passed (or has been

deemed to have passed) at not more than two sittings of the examination in: (a) English; (b) a language other than English; (c) mathematics; (d) one other subject (provided that all subjects are passed on the higher standard) or two other subjects if only three subjects (which must include English) are passed at the higher standard. Provided also in either case that the applicant shall submit evidence of having passed the Society's Entrance examination or the General Certificate of Education examination at advanced level in chemistry, physics and biology.\* The Pharmaceutical Society's Council may accept certificates of having passed other examinations which in its opinion are of a standard equal to those mentioned above. The fee to be paid for registra-tion as a "student" will be £4 4s.

The subjects of the Entrance exami-

nation are chemistry, physics and biology. The examination syllabuses are the same as those of the Society's Intermediate examination. The fee for entry to the examination is £3 3s. for any one subject.

\* Although normally it is not permissible to commence practical training under prescribed conditions in a pharmacy, hospital pharmaceutical department or manufacturing pharmaceutical laboratory until after registration as a "Student," it is permissible, with the consent of the Council, to commence such practical training when two only of the three subjects Chemistry, Physics and Biology have been passed in the General Certificate of Education examination at advanced level or in the Society's Entrance examination.

#### APPEND1X

University of Bristol. Cambridge Local Examinations Syndicate. Welsh Joint Education Committee. University of Durham.

University of London.

Joint Matriculation Board of the Northern
Universities. Oxford Local Examinations Delegacy.

Oxford and Cambridge Schools Examination

Board. The Associated Examination Board for the

General Certificate of Education.

Students who register after March 1. 1958, are being required to take a threeyear Qualifying course, the regulations for which are yet to be published. The period of practical training required to be taken by such students will be one year which may be taken either before or after the College course.

#### Degrees in Pharmacy

The alternative method of becoming a pharmacist is by taking a degree in pharmacy, followed by a period of practical training, the taking of the Qualifying examination in forensic pharmacy only, and subsequent registration. The degree student must satisfy the entrance requirements of the uni-versity concerned and the particular

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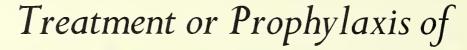
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faculty requirements for pharmacy before proceeding to three or four years' study as an external or internal student of the university for his degree. On obtaining his degree he may apply to the Society for examination in forensic pharmacy only, and having passed that examination and completed one year's unarticled practical training he will, provided he has attained the age of twenty-one, be entitled to registration as a pharmaceutical chemist.

There are a number of prizes awarded by the Council of the Pharmaceutical Society; pharmacists are allowed to enter for them at the competition next following the date on which they entered for the Qualifying examination; there are also research scholarships issued annually by the Society, and an annual travelling scholarship award.

A student of scientific and technical subjects is granted deferment of liability for calling up for National Service under certain conditions and "subject to making satisfactory progress in his studies," until after qualification.

The syllabuses for the new threeyear course have not yet been published. For the two-year course they are as approved by the Privy Council on March 4, 1954. They are:—

#### Pharmaceutical Chemistry

The examination in this subject comprises two written sessions, each of three hours' duration and one practical session of six hours' duration. The examiners are not precluded from asking candidates oral questions during the practical sessions.

The candidate will be required to have a knowledge of the following: The principles of physical chemistry treated in an elementary manner mainly with reference to their pharmaceutical application. The general principles of inorganic chemistry based upon the characteristics of the elements and compounds shown by the periodic relationships and an elementary treatment of valency and the electronic structure of their atoms. An elementary treatment of atomic structure. isotopes, nuclear chemistry, natural and induced radioactivity. general knowledge of organic chemistry, with particular reference to substances in frequent use in pharmacy. A knowledge of the structure, nomenclature and chemical properties of pharmaceutical importance of the following and such of their derivatives as are in the British Pharmacopæia:-Diphenyl ethane, triphenyl methane, naphthalene, anthracone, furan, pyrole, thiazole, pyrazole, imidazole, pyridine, quinoline, isoquinoline, acridine. The structure of phenanthrene. Chemical synthesis by means of the more important reagents. A knowledge of the chemistry of the following groups of medicinal organic compounds:—Sulphonamides, barbiturates, arsenical compounds, local anæsthetics. The general constitution and properties of the fixed oils, fats and waxes of the British Pharmacopæia. The principles involved in the estimation of the oxygenated constituents of essential oils. A knowledge of the structure and simple chemical properties of terpineol, limonene, carvone, menthol and cam-

The general methods employed for the extraction of alkaloids and the methods employed for the elucidation of their structure. The preparation and structure of uric acid, caffeine, theobromine and theophylline. A knowledge of the properties of pharmaceutical importance of vitamins and hormones of the British Pharmacopæia. The general chemistry of the carbohydrates, with a knowledge of the structure, excluding stereo-chemical considerations of glucose and methyl-glucosides, fructose, sucrose, lactose, salicin. An elementary knowledge of the classification and general characteristics of the proteins and of essential amino acids and their relationship to proteins. The principles of analysis as exemplified by the determinations and processes indicated in the practical syllabus.

#### PRACTICAL

Volumetric analysis. Gravimetric analysis. The quantitative determination of an alkaloid in acid or alcoholic solution. The determination of the acid, saponification and iodine values of fixed oils and fats. The determina-tion of adelhydes in volatile oils. The general methods for the detection and determination of chloride, sulphate, iron, arsenic and lead as impurities.
The determination of the melting point of solids readily reducible to a powder and of the boiling point, density, refractive index and optical rotation of liquids. The identification of the functional groups and the preparation of simple crystalline derivatives of organic compounds. The identifica-tion, or reference to class, of organic chemicals of the British Pharmacopæia. The qualitative analysis of mixtures of inorganic substances and organic acids and their salts commonly used in medicine. The preparation of simple organic compounds illustrative of the general processes involved in preparing substances included in the theoretical syllabus.

The candidate will be required to bring to the practical examination his original laboratory notebooks, duly signed by the teacher, for inspection should the examiners so desire. These notebooks must be taken away by the candidate at the close of the examination. The use of loose-leaf laboratory notebooks is not acceptable to the examiners. In the practical examination the candidate may use any book or books he chooses to bring including his own laboratory notebooks.

#### **Pharmaceutics**

The examination in this subject comprises two written sessions and two practical sessions each of three hours' duration. The examiners are not prechided from asking candidates oral questions during the practical session.

The candidate will be required to have a knowledge of the following:—
The historical development of pharmacy. The application of physical phenomena to pharmaceutical operations—change of state; systems of two or more components — solutions, dispersions. Pharmaceutical processes and products—preparation of material; solvents; extraction; assay and standard-

isation; clarification and filtration including removal of fat, proteins, gums, pectins, tannins; ultrafiltration; stabilisation—maintenance of stability during storage; enzymes. The products of the British Pharmacopæia and the British Pharmaceutical Codex to be used to illustrate the above. The nature and properties of materials used in the construction of pharmaceutical apparatus. Microbiology in so far as it affects the content of this syllabus. Sterilisation and the preparation of sterile medicaments and materials. Disinfectants and antiseptics—methods for evaluation of disinfectants. Bacteriostatics and fungistatics. Asepsis in the preparation of sterile products sources of contamination; aseptic precautions. The preparation, properties and storage conditions of immunological and diagnostic agents of the British Pharmacopæia; the general principles underlying their standardisation. Dispensing practice-ethical codes; the prescription-purpose, property rights; the doses of medicaments of the British Pharmacopæia; dispensing and compounding of medicines; containers; medical gases-containers and apparatus required and its use; equipment and organisation of the pharmacy.

#### PRACTICAL

The student must be prepared to carry out ordinary pharmaceutical operations included in the British Pharmaceutical Codex, the dispensing of prescriptions, the preparation and dispensing of sterile medicaments and materials, the detection of unusual doses and the completion of preparations in a proper manner. The preparation of sterile medicaments and materials includes the preparation of culture media, methods of evaluating antibiotics, sensitivity tests and tests for sterility.

The candidate will be required to bring to the practical examination his original laboratory notebooks, duly signed by the teacher, for inspection should the examiners so desire. These notebooks must be taken away by the candidate at the close of the examination. The use of loose-leaf laboratory notebooks is not acceptable to the examiners. In the practical examination the candidate will have the opportunity of consulting the British Pharmacopæia and the B.P.C.

#### Pharmacognosy

The examination in this subject comprises one written session of three hours' duration and one practical session of three hours. The examiners are not precluded from asking candidates oral questions during the practical session.

The candidate will be required to have a knowledge of the following:—

1. The commerce in and history of crude drugs. 2. Systems of classification of crude drugs. 3. Cultivation, collection, preparation for the market and storage of crude drugs. 4. Changes occurring in the drying, storage and comminution of crude drugs. The factors and organisms influencing deterioration of crude drugs. 5. Methods

used for the examination of crude drugs. The isolation and identification of tissues and cells. Microchemical tests for cell walls and cell contents.
Microscopical measurements. The systematic description of crude drugs. 6. The macroscopical and sensory characters, biological and geographical sources, commercial varieties and adulterants and constituents of the crude drugs in frequent use in pharmacy. 7. The microscopy of drugs of organised structure in the whole, broken or powdered condition, as illustrated by cascara, clove, cardamom fruit, fennel, belladonna herb, ginger, liquorice, ipecacuanha. 8. The microscopy of the starches and starch products of pharmaceutical importance. The use of microscopical characters to identify drugs of unorganised structure in frequent use in pharmacy. 9. Groups of drug constituents and their significance in pharmacy. Qualitative tests for the identification of, or the detection of adulteration in, the crude drugs in frequent use in pharmacy. 10. The types and significance of standards for crude drugs included in the British Pharmacopœia and the British Pharmaceutical Codex. The evaluation of crude drugs. 11. Unmedicated surgical dressings, their manufacture, structure and standards. The sources, preparation, characters, qualitative chemical tests and constituents of fibres used in the manufacture of surgical dressings. 12. The principles underlying the practical work of the syllabus.

#### PRACTICAL

The candidate must be prepared: 1. To examine and describe the macroscopical characters, the general distribution of tissues, the nature of the cell walls and the cell contents of crude drugs and to refer them to their morphological groups. 2. To identify in the entire or broken condition, by their gross characters and by qualitative tests, the crude drugs in frequent use in pharmacy and to state their bio-logical and geographical sources. 3. To detect adulteration and deterioration in crude drugs in frequent use in pharmacy. 4. To analyse mixtures of crude drugs in the entire or broken conditions. 5. To examine microscopically, identify and describe the drugs included in paragraphs 7 and 8 of the theoretical syllabus. 6. To identify powders of single crude drugs and to report upon their purity. 7. To make microscopical measurements. 8. To examine, identify and report on the graph 11 of the theoretical syllabus. 9. To carry out simple exercises in drug evaluation. 10. To recognise, in the entire condition, those crude drugs used in pharmacy or as sources of isolated principles.

The candidate will be required to bring to the practical examination his original laboratory notebooks, duly signed by the teacher, for inspection should the examiners so desire. These notebooks must be taken away by the candidate at the close of the examination. The use of loose-leaf laboratory notebooks is not acceptable to the examiners. In the practical examination the candidate may use the British

Pharmacopæia, the British Pharmaceutical Codex and his own practical notebooks, except for the answering of those questions involving the identification and/or objective descriptions of crude drugs or the microscopical characters of those drugs indicated in paragraph 5 of the practical syllabus.

#### Physiology and Pharmacology

The examination in this subject comprises one written session of three hours' duration and one practical session during the latter of which the candidate will be required to carry out a practical exercise (occupying possibly about forty minutes) and undergo an oral examination in which the examiner may ask questions on both the theoretical and practical work of the syllabus.

The candidate will be expected to possess an elementary knowledge of the basic facts in the branches of physiology and pharmacology listed below, and of the main methods by which these facts were established.

#### PHYSIOLOGY

(General): The properties and control of skeletal, visceral and cardiac muscle. The formation, properties, functions and circulation of the blood and lymph. The mechanism and control of pulmonary ventilation; gaseous interchange at the lungs and tissues. Artificial respiration. The alimentary tract. Basal metabolism and body heat. The principles involved in constructing a balanced diet; vitamins. The kidneys and urinary tract. central and peripheral nervous systems, including the autonomic nerves. The special senses of sight, taste and smell. The structure and functions of the glands of internal secretion including (a) pituitary body, (b) thyroid and parathyroids, (c) pancreas, (d) suprarenals, (e) testes and ovaries. The elements of reproduction in man. (Histology): The candidate must possess an elementary knowledge of the microscopical structure of the following:-muscle and nerve; the heart, blood vessels and blood; lungs; the digestive glands; stomach and intestines; liver; kidneys; skin, the endocrine glands and the reproductive organs, including the mammary gland and the placenta. (Biochemistry): The biochemistry and metabolism of carbohydrates, fats and proteins. The composition and functions of the salivary, gastric, biliary, pancreatic and intestinal secretions. The composition and nu-tritional value of common food stuffs. The chemistry of muscular contraction. The composition of blood, lymph and cerebrospinal fluid. Normal and abnormal constituents of urine.

#### PHARMACOLOGY

Scope for pharmacology. Theories of and factors affecting drug action. Quantitative methods in pharmacology. Dose-response curve. The general principles and methods underlying the biological assays of the British Pharmacopæia, excluding the assays of sera, vaccines and bacterial derivatives. Special attention should be given to the determination of toxicity and LD50. An elementary study of the

statistical principles involved in the assessment of the error of these quantitative tests. Drugs affecting structures innervated by the autonomic nervous system and the somatic motor nerves. Drugs used as central nervous depressants and stimulants. Anti-pyretics. Local anæsthetics. Emetics, antacids; purgatives; astringents; diuretics. Disinfectants, bactericides and bacteriostatics including antibiotics. The application of pharmacological principles in treatment of poisoning.

#### PRACTICAL

The candidate must be prepared:—To show his acquaintance with the methods employed for the demonstration of fundamental physiological and pharmacological processes, as laid down in the foregoing syllabus, and to carry out such chemical manipulations or simple experiments as are comprised therein. To recognise and describe with diagrams, histological preparations of any tissue or of any organs mentioned in the foregoing syllabus.

The candidate will be required to bring to the practical examination his original laboratory notebooks, duly signed by the teacher, for inspection should the examiners so desire. These notebooks must be taken away by the candidate at the close of the examination. The use of loose-leaf laboratory notebooks is not acceptable to the examinary

aminers.

#### **Forensic Pharmacy**

The examination in this subject comprises one written session of three hours' duration.

The candidate will be required to have a knowledge of the following enactments and the subordinate legislation made under them, in so far as they are applicable to the practice of pharmacy in Great Britain:—the Pharmacy and Poisons Acts, 1933, and the Pharmacy Act, 1954, the Dangerous Drugs Act, 1951, the Acts relating to the National Health Service, the Shops Act, 1950, the Protection of Animals Act, the Food and Drugs Act, The Venereal Disease Act, the Cancer Act, the Therapeutic Substances (Prevention of Misuse) Acts, 1947 to 1953, the Radio-Active Substances Act, and the Acts relating to the sale of spirits (including methylated spirits) and medicated wines and the sale of abortifacients.

#### BOOKS FOR STUDENTS

AMONG books for pharmacy students published by the Pitman Medical Publishing Co., Ltd., 45 New Oxford Street, London, W.C.1, are: "Tutorial Pharmacy," "Dispensing for Pharmaccutical Students" (Cooper and Gunn); "Practical Pharmaceutical Chemistry," "Theoretical Pharmaceutical Chemistry" (Appleyard and Lyons); "A Textbook of Pharmacognosy" (Denston); "Latin for Pharmaceutical Students" (Cooper and McLaren); and "Practical Plant Chemistry for Pharmacy Students" (E. J. Shellard, to be published Autumn 1957).

#### OTHER COURSES OPEN TO STUDENTS

**London External Degrees** 

THE following technical colleges offer courses leading to the Intermediate Bachelor of Pharmacy (London) (external) examination. In the list the date of commencement is followed (in parentheses) by the date of enrolment for the course. Applications for places should be made as soon as possible.

ABERDEEN: Robert Gordon's Technical College, October 1 (August 31); BLACKBURN: Municipal Technical College, September 9 (ditto)); BOLTON: Technical College, September 9 (August 26-30); BOURNEMOUTH: College of 26-30); BOURNEMOUTH: College of Technology and Commerce, September 16 (September 9-12); BRADFORD: Technical College, September 24 (September 16-19); BRIGHTON: Technical College, September 19 (September 17); BRISTOL: College of Technology, September 19 (by September 1); Colchester. North-east Essex Technical College September 16 (September 10-12): tember 19 (by September 1); COLCHESTER: North-east Essex Technical College, September 16 (September 10-12); COVENTRY: Technical College, September 23 (September 12); CROYDON: Technical College, September 16-18); DAGENHAM: South-east Essex Technical College, September 18 (September 17); DARTFORD: North-west Kent College of Technology, September 9 (immediately); DERBY: Technical College, September 24 (September 17); DUNDEE: Technical College, September 23 (immediately); EWELL: County Technical College, September 23 (september 16-18); HALIFAX: Percival Whitley College, September 23 (September 9-12); HULL: College of Technology, September 16 (September 10-13); LEEDS: College of Technology, September 11 (September 10); LEICESTER: College of Technology, September 16); LONDON: Acton Technical College, September 23 (September 16): Northern Polytechpic September 16): Northern Polytechpic Se Technical College, September 23 (September 16); Northern Polytechnic, September 16); tember 23 (immediately, full-time, September 17 part-time); Norwood Technical College, September 10 (immediately); Regent Street Polytechnic, September (evening classes, September 18); South-west Essex Technical, September 11 (ditto); NEWPORT: Technical Col-It (aitto); NEWPORT: Technical College (details from College); Norwich: City College and Art School, September 23 (September 16); PORTSMOUTH: College of Technology, September 16 (September 10–12); PRESTON: Harris College of Further Education, September 23 (September 10–23) (September 23) ber 23 (September 16–22); SOUTHEND-ON-SEA: Municipal College, September (ditto); SUNDERLAND: Technical College, October 1 (September 18); WIGAN: Technical College, September 23 (September 9-13).

#### Final R.Pharm.

The following technical colleges offer courses for the final Bachelor of Pharmacy (London) (external) examination: BRADFORD: Technical College, September 24 (September 16–19); BRIGHTON: Technical College, September 12 (no vacancies); LEICESTER: (College of Technology, September 16); LONDON: Chelsea Polytechnic, September 23 (no vacancies): PORTS-September 23 (no vacancies); Ports-MOUTH: College of Technology, Sep-tember 16 (September 10–12); SUNDER-LAND: Technical College, October 1 (September 18).

#### Revision and Post-graduate Courses, etc.

BRADFORD: Technical College; facili-

BRADFORD: Technical College; facilities for post graduate research.
BRIGHTON: Technical College; post-graduate course of four lectures on "Essential Oils" in autumn term. Post-graduate course of ten lectures on "Surface Chemistry."

EDINBURGH: Heriot-Watt College; post-graduate course for associateship of the college in applied pharmacy, commencing October 8 (enrolment July 31).

GLASGOW: Royal College of Science and Technology; post-graduate course for diploma in advanced study in chemistry and chemical engineering

(details from college).

LONDON: Acton Technical College; course of twelve lectures on nuclear chemistry, commencing September 24; ten lectures on chromatography, commencing October 9; ten lectures on the chemistry of oil and fats, commencing October 2; ten periods on the chemistry and physics of waxes, commencing October 3; six lectures on radiochemistry, commencing November 7; ten lectures on biochemistry, commencing September 27; ten lectures on microbiology, commencing October 1.
Northern Polytechnic, evening courses in gas chromatography, electronic Northern Polytechnic, evening courses in gas chromatography, electronic devices in physical and analytical chemistry, laboratory techniques in the study of organo-compounds of boron, silicon and phosphorus, research in chemistry (apply to college). Woolwich Polytechnic; evening refresher course for A.R.I.C.

LIVERPOOL: College of Technology;

post-graduate courses on microscopy of foods and drugs, physiology and phar-

macology.

ST. HELENS: Technical College; courses in radio-isotopes, instrumenta-tion and process control, refractories (details from college).

WIGAN: Mining and Technical College; post-graduate courses in chemical spectroscopy, instrumental methods of

analysis.

WOLVERHAMPTON: Technical College; courses in radiochemistry, spectro-graphy, general biochemistry, physical methods of chemical analysis.

Diploma in Biochemical Analysis THE course for the Diploma in Biochemical Analysis of the Pharmaceutical Society is concerned with the chemical examination of urine, blood, etc.

Courses are available at:—
London: Chelsea Polytechnic, October 16 (September 18); NOTTINGHAM: University; SOUTHEND: cipal College, September 30 (September 16-20) (subject to satisfactory enrol-ment; SUNDERLAND: Technical College (if demand justifies); Swansea: Technical College, September 23 (September 16-21).

#### General Certificate in Education (Advanced Level)

Among colleges who are offering a course for the G.C.E. (advanced level, accepted for admittance to the pharmaceutical qualifying examination) are:-

FOLKESTONE: Technical College (de-

tails from College).

LONDON: Acton Technical College;
September. Norwood Technical Collegc; September.

SALFORD: Royal Technical College (details from College).
WOLVERHAMPTON: Technical College

(details from college).
SOUTHPORT: Technical College; September 2 (before September 2).

#### Apothecaries' Assistants

COMPLYING with obligations laid down in the Apothecaries Act, 1815, the Society of Apothecaries of London, Black Friars Lane, Queen Victoria Street, London, E.C.4, continues to issue "certificates of competence to act as assistants in dispensing." Candidates for the examination are examined in dispensing, chemistry, pharmacology, forensic pharmacy, and the translation of prescriptions. Examinations are held in January, April, July and October of each year. Courses (where school is not named refer to list on p. 66):— London: London College of Pharmacy for Women, 7 Westbourne Park Road, Bayswater, London. W.2. Aston: Technical College. Belfast: College of Technology. Blackburn (chemistry only). Bolton. Bournemouth, Bradford, Brighton, Bristol: The Dispensary, Bristol General Hospital, College of Technology. Cardiff: Corby Technical College. Chatham: Medway Technical College. Coventry (chemistry only). Dartford: College of Technology. Derby (chemistry only; pharmacology and dispensing might be arranged at a hospital). Edinburgh: Chemical Laboratory. Royal Infirmary. Huddarsfeld boratory, Royal Infirmary. Huddersfield (chemistry only). Hull (chemistry only). Ipswich: East Suffolk and Ipswich Hospital. Leicester. Liverpool: Central Technical College. Luton: Luton and South Bedfordshire College. Newark, Notts: County Technical College. Newcastle-on-Tyne: Royal Victoria Infirmary, Queen Victoria Road, Newport (chemistry only). Northampton (chemistry only). Norwich (chemistry only). Oxford: Schools of Technology, Art and Commerce (chemistry only). Plymouth. Portsmouth. Sheffield: College of Technology (chemistry only). The Royal Sheffield Infirmary and Hospital. Smethwick: Chance Technical College. Southend. Stockport. Stoke-on-Stockport, Stoke-on-Trent (chemistry only). Sunderland, Swansea (chemistry only). Wolverhampton and New Cross Hospital, N.B. Arrangements may be made to study chemistry at a technical college, and to complete the training in a chemists shop or hospital dispensary.

#### Pharmacy (Northern Ireland)

Apprenticeship:—Up to October 1, 1957, a candidate to be eligible for registration as an apprentice must have passed on one and the same occasion either the Matriculation examination of any University in the United Kingdom, the Grammar School Senior Certificate examination of the Northern Ireland Ministry of Education or the General Certificate of Education of the University of London in English or English language, a mathematical subject and three of the following:—English litera-

## COURSES FOR PHARMACY STUDENTS

#### 1. INTERMEDIATE EXAMINATION

THE following table gives details of courses for the Pharmaceutical Society's Intermediate examination. Intending students should apply for places as soon as possible.

The designation of the department is indicated by the italic letter following the name of the institution:—B=Biology; C=Chemistry; P=Pharmaceutical; S=Science

Centre	Institution	Head of Department	Session starts	Enrolment
ABERDEEN	Robert Gordon's Technical			
	College* P	J. E. Bowen, B.Sc., F.P.S., F.R.I.C.	October 1	August 31
BIRMINGHAM	College of Technology* P	F. R. C. Bateson, B.Pharm., F.P.S.	September 23	September 9–13
BIRKENHEAD	Technical College C	D. G. Cooper, B.Sc., F.R.I.C., A.I.B.P.	September 2	September 2
Blackburn	Municipal Technical College S	A. Walton, M.Sc., F.R.I.C., Dip. Ed.	September 9	September 9
BOLTON	Technical College C	L. P. Lawrence, M.Sc., A.R.I.C.	September 9	August 26–30
BOURNEMOUTH	Municipal College of Technology	G I G DG I DGG ED I G	g , 1 16	6
	and Commerce S	C. J. Cooper, B.Sc., A.R.C.S., F.R.I.C.	September 16	September 9–12
Bradford	Technical College* P	F. N. Appleyard, B.Sc., F.P.S., F.R.I.C.	September 24	September 16–19
Brighton	Technical College* P	James C. Parkinson, B.Pharm., Ph.D., F.P.S., F.R.I.C.	September 19	September 17
Bristol	College of Technology* P	D. A. Norton, B.Sc., F.P.S., A.C.T. (Birm.)	September 19	By September 1
BURNLEY	Municipal College C	F. Clifford, B.Sc.	September 23	September 16
	Technical College C	F. H. Day, Ph.D., M.Sc., F.R.I.C., F.C.S.	September 16	September 10–13
0	Medway College of Technology C	H. 1. Stonehill, Ph.D., B.Sc., F.R.I.C.,	september re	September 10 15
Снатнам	Wiedway Conege of Technology C	D.I.C.	September 10	September 9
CHELMSFORD	Mid-Essex Technical College S	M. R. Gridley, B.Sc., F.Inst.P.	September 23	Immediately
CHELTENHAM	North Gloucestershire Technical	, , , , , , , , , , , , , , , , , , , ,	·	
	College S	L. McPherson, M.Sc., F.Inst.P.	September 16	September 9–13
COLCHESTER	North-east Essex Technical			
	College S	S. H. Potter, B.Eng., A.M.I.M.E.	September 16	September 10–12
COLWYN BAY	Grammar School S	T. O. Griffiths, B.Sc., F.R.I.C.	September	July
COVENTRY	Technical College C	H. C. Smith, M.Sc., Ph.D., F.R.I.C.	September 23	September 12
Croydon	Technical College C	S. R. Robinson, Ph.D., B.Sc., F.R.I.C.	September 23	September 16–18
Crumlin	Technical College of Monmouthshire C	V. A. Hewlett, F.R.I.C., MSc.	September 12	September 9
Digrama	South-east Essex Technical	V. A. Hewlett, P.R.I.C., MSC.	September 12	September
DAGENHAM	College C	J. Ratcliffe, B.Sc., F.R.I.C.	September 17	September 16
Dartford	North-west Kent College of	, , , , , , , , , , , , , , , , , , , ,		Immediately
DARTI GRD	Technology S	J. R. Barr, M.Sc., F.R.I.C.	September 9	By letter
DERBY	Technical College C	A. G. Catchpole, Ph.D., B.Sc., F.R.I.C.	September 23	September 16
DONCASTER	Technical College C	W. F. Andrews, M.Sc., B.Sc., A.R.I.C.	September 23	September 16
DUNDEE	Technical College* P	H. A. Perkin, B.Pharm., F.P.S.	September 23	Up to
				September 23
Edinburgh	Heriot-Watt College* P	H. H. Campbell, B.Sc., F.P.S., F.R.1.C.	October 8	July 31
Enfield	Technical College C	J. E. Jones, B.Sc., A.Inst.P.	September 23	September 12–17
EWELL	County Technical College S	R. L. D. Ellis, M.Sc., F.R.1.C.	September 23	September 16–18
FOLKESTONE	Technical College C	K. L. Scott, Ph.D., B.Sc.	September 16	Immediately
GLOUCESTER	Technical College S	R. B. Williams, B.A., B.Sc., D.Phil., M.A.	September 24	September 10–13
GUILDFORD	County Technical College C	J. C. Bevan, M.A., B.Sc., A.R.I.C.	September 23	Immediately
HALIFAX	Percival Whitley College of Further Education	L. Hey, B.Sc., Ph.D., A.R.I.C.	September 23	September 9–12
Huddersfield	Technical College P	D. O. Weitzel, B.Sc.	September 16	September 9
	College of Technology I	J. J. Small, B.Pharm., F.P.S., D.B.A.	September 16	September 10–13
HULL	Conege of Technology /	J. J. Sman, B.i narm., P.i.s., D.B.A.	September 10	Beptemoer 10 15
Kingston-on- Thames	Technical College C	N. E. Lindop, B.Sc., F.R.I.C.	September 23	September 16-17
LEEDS	College of Technology C	W. R. Burnham, M.Sc., Ph.D., A.R.I.C.	September 11	September 10
Leicester	College of Technology* P	C. Gunn, B.Pharm., F.P.S.	September 16	By September 16
Liverpool	College of Technology* P	T. L. Bowyer, F.P.S., F.R.I.C.	September 16	September 13
London	Acton Technical College C	J. H. Skellon, T.D., M.Sc., Ph.D., F.R.I.C.	September 23	September 16
	Northern Polytechnic C	W. Gerrard, D.Sc., Ph.D., F.R.I.C.	September 23	Immediately
				Full-time,
				September 17–18 Part-time
	Name of Taskein-1 Calless C	M. I. Dirahanayah Dh. D. E.D. I.C.	Contombor 0	Immediately
	Norwood Technical College C	M. J. Birchenough, Ph.D., F.R.I.C. W. Davey, Ph.D., B.Sc., F.R.I.C.	September 9 September	September 18
	Regent Street Polytechnic C South-west Essex Technical	w. Davey, Fil.D., B.SC., F.K.I.C.	september	Evening only
	College S	R. W. Jukes, B.Sc., A.R.I.C.	September 11	September 11
MIDDLESBROUGH	Constantine Technical College S	G. Bulmer, M.A., Ph.D., F.R.I.C.	September 23	Immediately
MIDDLESBROUGH	Constantine reclinear Conege b		Topicalist. 20	

Centre	Institution	Head of Department	Session starts	Enrolment
NEATH	Technical College S	E. McCutcheon, M.Sc.	September	September
Newcastle	Rutherford College of	,		
	Technology C	L. Hallett, M.A., F.R.I.C.	September 23	September 9–13
NEWPORT	Technical College C	L. McGraghan, M.Sc., F.R.I.C.	Scptember 9	September 2
NORTHAMPTON	College of Technology S	W. Siddall, B.Sc., Ph.D., A.R.I.C.	September 16	September 9
Norwich	City College and Art School S	R. Jones, B.Sc.	September 23	September 16
NOTTINGHAM	Technical College S	J. R. Rowlands, M.Sc., A.R.I.C.	September 23	September 13
PAISLEY	Technical College C	J. S. McLean, B.Sc., F.R.I.C.	September 30	Immediately
PLYMOUTH	Technical College* P	V. Smith, M.Sc., F.R.I.C., F.P.S.	September 16	August 30
PORTSMOUTH	College of Technology* P	E. Thorpe, B.Sc., B.Pharm., F.P.S	September 16	September 10–12
Preston	Harris College of Further			
	Education C	S. Skidmore, B.Sc., Ph.D., A.R.I.C.	September 23	September 16–19
REDRUTH	Cornwall Technical College S	J. R. Slater, B.Sc.	September 12	By September 5
ROTHERHAM	College of Technology C	M. B. Thompson, A.R.S.M., B.Sc., Ph.D.	September 23	September 9–13
St. Helens	Technical College C	L. W. M. Tyrrill, B.Sc., Ph.D., F.R.I.C.	September 18	September 9–12
Salford	Royal Technical College C	G. R. Ramage, D.Sc., Ph.D., F.R.I.C.	September 19	No vacancies
SHREWSBURY	Technical College S	P. K. Bingham, M.Sc.	September 10	September 10
SOUTHEND-ON-SEA	Municipal College C	C. R. Barnes, B.Sc., A.R.I.C.	September 9	September 9
SOUTHPORT	Technical College S	A. E. Hollis, B.Sc.	September 2	Before
~				September 2
STOCKPORT	The College C	H. H. Armstrong, B.Sc., F.R.I.C.	September 23	September 17–18
STOKE-ON-TRENT	North Staffordshire Technical			
_	College C	W. K. Wilde, M.Sc., F.R.I.C.	September 23	September 16–20
SUNDERLAND	Technical College* P	F. H. Oliver, B.Sc., B.Pharm., F.P.S.	October 1	Scptember 16–18
SWANSEA	Technical College C	A. R. Lowe, B.Sc., Ph.D., D.I.C., F.R.I.C.	September 23	September 16–21
TORQUAY	South Devon Technical College			Up to
***	C	C. A. Colman-Porter, M.Sc., F.R.I.C., F.C.S.	September 16	September 16
WEYBRIDGE	Brooklands County Technical	D C D A D C G A D I C	G	C 10 10
XX7	College S	R. C. Rogers, M.Sc., A.R.C.S., A.R.I.C.	September 23	September 16–18
Wigan	Wigan Mining and Technical	H V Deer BC. Bb D EBIC	C- + 22	Contamban 12 12
Wervenman	College C	H. K. Dean, B.Sc., Ph.D., F.R.I.C.	September 23	September 12–13
WOLVERHAMPTON WREXHAM	College of Technology Denbighshire Technical College	J. A. Waddams, M.Sc., A.R.I.C.	September 16	September 9–11
WREXHAM	C C	E. W. Claydon, Ph.D., F.R.I.C.	September 16	September 9–11
		D Claydon, I h.D., I .R.I.C.	September 10	September 7-11

\*Institutions also offering a course for the Qualifying examination.

#### 2. QUALIFYING EXAMINATION

Centre		Institution	Head of Pharmaceutical Department	Session starts	Enrolment .
ABERDEEN BIRMINGHAM BRADFORD BRIGHTON		Robert Gordon's Tech, College College of Technology Technical College Technical College	J. E. Bowen, B.Sc., F.P.S., F.R.I.C. F. R. C. Bateson, B.Pharm., F.P.S. F. N. Appleyard, B.Sc., F.P.S., F.R.I.C. James C. Parkinson, Ph.D., B.Pharm.,	October 1 September 23 September 24	August 31 No vacancies September 16–19
Bristol		College of Technology	F.P.S., F.R.I.C. D. A. Morton, B.Sc., F.P.S.	September 19 September 17	No vacancies Immediate
CARDIFF		Welsh School of Pharmacy, Welsh College of Advanced			
DUNDES		Technology Technical College	R. V. Lloyd, B.Pharm., F.P.S. H. A. Perkin, B.Pharm., F.P.S.	September 25 September 30	No vacancies Up to
EDINBURGH GLASGOW		Heriot-Watt College Royal College of Science and	H. H. Campbell, B.Sc., F.P.S., F.R.I.C.	October 8	September 30 No vacancies
Leicester		Technology College of Technology	J. P. Todd, Ph.D., F.P.S., F.R.I.C. C. Gunn, B.Pharm., F.P.S.	October 7	No vacancies
LIVERPOOL	•••	College of Technology	T. L. Bowyer, F.R.I.C., F.P.S.	September 16 September 17	No vacancies No vacancies
LONDON		Chelsea Polytechnic	C. Morton, B.Sc., F.P.S.	September 23	No vacancies
MANCHESTER		The University	K. Bullock, Ph.D., F.P.S., F.R.I.C	October 3	No vacancies
NOTTINGHAM		The University	G.E. Trease, B.Pharm., F.P.S., F.R.I.C., F.L.S.	October	No vacancies
PLYMOUTH	•••	Technical College	Professor W. H. Linnell, D.Sc., Ph.D.,	September 16	August 30
PORTSMOUTH		College of Technology	F.P.S., F.R.I.C. E. Thorpe, B.Sc., B.Pharm., F.P.S	Cantambar 16	September 10–12
SUNDERLAND		m a	F. H. Oliver, B.Sc., B.Pharm., F.P.S.	September 16 October 1	September 18
		. common comoge	1. 11. Oliver, D.Oo., D.I Hallin, 1.1.0.	OCTOBEL 1	September 16

#### 3. UNIVERSITY INTERNAL DEGREE COURSES IN PHARMACY

The following universities and colleges offer courses for internal degrees in pharmacy.

Centre	Institution	Head of Pharmaceutical Department	Session starts	Enrolment
CARDIFF	Welsh School of Pharmacy, Welsh College of Advanced			
GLASGOW	Technology	R. V. Lloyd, B.Pharm., F.P.S.	September 26	No vacancies
	Technology	J. P. Todd, Ph.D., F.P.S., F.R.I.C.	October 7	No vacancies
LONDON .		C. Morton, B.Sc., F.P.S.	September 23	No vacancies
	School of Pharmacy, University of London	Professor W. H. Linnell, D.Sc., Ph.D., F.P.S., F.R.I.C.	October 3	No vacancies
MANCHESTER .	. The University	K. Bullock, Ph.D., F.P.S., F.R.I.C	October 3	No vacancies
NOTTINGHAM .	. The University	G. E. Trease, B.Pharm., F.P.S., F.R.I.C., F.L.S.	October	No vacancies

ture (where that is a separate subject), Latin, French, German, domestic science, history, geography, botany or biology or zoology, chemistry, physics or mechanics. After October 1, 1957, a candidate must have passed in English or English language, a mathematical subject, physics, chemistry and one of the following:—English literature (where that is a separate subject), a foreign language, domestic science, history (modern or ancient), geography, botany or biology or zoology.

Preliminary Scientific Examination:—After registration the student must attend a one-year full-time course of instruction in the subjects of Final Part I Qualifying Examination. A student who has failed on three occasions to pass the examination may be permitted a fourth attempt only if so recommended by the board of examiners. A student who has passed the Final Part I Qualifying examination must then serve an apprenticeship of two years under a registered pharmacist.

Pharmaceutical Chemist Qualifying Examination:—After completion of apprenticeship the student must attend a two-year course of study for the Final Part II Qualifying examination. On passing that examination, provided he is not less than twenty-one years of age, the student may receive a certificate of qualification. A person who has passed the final examination for the degree of pharmaceutics of the Queen's University, Belfast, and who satisfies the Examiners in such other subjects as the Council may determine shall be granted a certificate of qualification.

Syllabuses:—The syllabuses for the Intermediate and Qualifying examinations are the same as for the corresponding examinations in Britain, except in the case of pharmacognosy where the old syllabus, setting out the drugs to be studied, is retained. Examinations are being held in June and December of each year. The entrance fees are:—Final Part I, First time of entry, £6 6s.; any subsequent entry, £4 4s. Final Part II, First time of entry, £12 12s.; any subsequent entry in all subjects, £10 10s.; and any subsequent entry in not more than two subjects, £6 6s.

A student who has failed to pass the Final Part II Qualifying examination on any occasion may be required to undertake an approved course of study in one or more subjects before being permitted to enter again.

#### Pharmacy (Republic of Ireland)

An applicant for registration as a pharmaceutical student in the Republic of Ireland must have passed a preliminary examination in English, Irish, Latin, mathematics, and a fifth subject and in addition the pre-registration examination of the Pharmaceutical Society of Ireland. A candidate who has gained credit for physics and chemistry (or general science) in the preliminary examination or in certain university examinations is exempt from the pre-registration examination. The preliminary examination may be: (a) the Leaving Certificate examination of the Irish Department of Education, (b) the matriculation examination of the National University, (c) any examina-

tion of equivalent standard, conducted outside the State, which may be acceptable to the Council.

The Science Course. — A registered student must attend the Society's College for a continuous course of three terms of lectures in pharmaceutical and general chemistry, biology, pharmaceuticals, forensic pharmacy, history of pharmacy and ethics. A student must pass terminal examinations and the First Professional examination (held annually).

Apprenticeship.—A student who has passed the First Professional examination must serve three years as an apprentice in an approved pharmacy.

The Pharmacy Course.—At the conclusion of apprenticeship a student returns to the Society's College for a further continuous course of three terms of lectures in pharmaceutical chemistry, pharmaceutics, pharmacognosy, pharmacology, forensic pharmacy. A student who has passed terminal examinations is entitled to enter for the Second Professional examination. On passing this he is eligible for registration as a pharmaceutical chemist.

Syllabus: CHEMISTRY.—(a) Theoretical and Physical Chemistry: Atomic structure, gas laws, kinetic theory of gases, osmotic pressure, law of mass action, laws of electrolysis, ionisation, solubility products, pH values (including buffer solutions and indicators), molecular weight determinations, radioactivity, bond structure. (b) Inorganic Chemistry: A study of the chemistry of the elements based on the periodic table interpreted in the light of modern views on atomic structure. (c) Organic Chemistry: A general study of aliphatic and aromatic compounds, with special reference to those of pharmaceutical importance.

Practical: Qualitative analysis of simple salts and of mixtures containing not more than two basic and two acidic radicals. Volumetric analysis, including acidimetry and alkalimetry, permanganate, iodine and silver nitrate titrations; simple problems involving such titrations. Preparation of simple organic substances, including tests for purity such as melting-point and boiling-point determinations.

PHARMACEUTICS.—Theoretical: paration of pharmaceutical products of the Pharmacopæia, processes there employed, official methods of standardisation, processes employed in the compounding of prescriptions, precautions in aseptic dispensing, pharmaceutical sterilisation, application of physicochemical concepts to pharmacy (e.g., osmotic pressure, pH solubility product, acid-base reactions, etc.). Practical: Weighing, measuring and compounding medicines, writing directions and finishing properly, calculation of quantities in prescriptions, detection of incompatibilities and overdoses, prepara-tion of official and semi-official galenicals, sterilisation of medicaments and solutions for injection, identification of medicaments and preparations commonly used in medicine, compounding under aseptic conditions.

PHARMACOGNOSY. — The recognition of specimens of vegetable and animal

substances used in medicine, a knowledge of the family, methods of cultivation, collection and preservation of drugs, and their source (botanical or zoological, and geographical); their chief constituents and adulterants; their galenical preparations and doses.

BOTANY. — General morphology and physiology of the plant kingdom, systematic botany, characteristics of the principal members of the vegetable kingdom (algæ, fungi, pteridophyta and thallophyta) and the characters of a number of selected families.

ZOOLOGY. — General morphology of the animal, with special reference to a few selected examples, e.g., rabbit, dogfish, etc. Phyiology of animals: respiration, absorption, digestion and elaboration of food materials; enzymes and hormones.

BIOCHEMISTRY.—Chemical structure of human tissues (e.g., bone, muscle, blood). Hormones, vitamins and enzymes, their location and action, and diseases caused by deficiency. Human physiology, location and functions of the principal human organs, action of medicaments in the treatment of infections and diseases.

INTRODUCTION TO BACTERIOLOGY.—A course on the biology of bacteria, the preparation of culture media, staining, etc., to provide students with a basis for more advanced work in the pharmaceutics course.

Assistants' Examination. — A registered student who has passed the First Professional examination and who has completed his period of apprenticeship may enter for an examination for the qualification of Assistant to Pharmaceutical Chemist. This entitles the holder to carry out the duties of a pharmaceutical chemist in the temporary absence of one such but does not entitle him to conduct open shop.

Membership.—A person whose name is entered on the Register of Pharmaceutical Chemists may use the suffix L.P.S.I. He may apply for membership of the Society (M.P.S.I.) and on election pays an annual subscription of £3 3s.

Fees. — Preliminary registration, £4 4s.; Science course, £63; First Professional examination, £6 6s.; Pharmacy course, £63; Second Professional examination, £6 6s.; Assistants' examination, £3 3s.; Assistants' registration, £2 2s.; Licence registration, £10 10s.

A student registered prior to July 31, 1952, may elect to follow the regulations which were in force up to that date. If such a student has not passed the Licence examination during an interim period of six years, he will be obliged to conform to the regulations summarised above. The Licence examination is conducted in two parts (corresponding to the First and Second Professional examinations). Part 1 consists of chemistry, botany and biology; part 2 of pharmaceutics, pharmacognosy, compounding and dispensing, forensic pharmacy. A candidate may not take part 2 until he has passed part 1. A candidate who fails part 1 may enter for re-examination at intervals of three months. A candidate who fails part 2 may enter for re-

examination at intervals of six months. The fee for either part is £6 6s.

The interim period for students registered prior to July 31, 1952, expires on July, 31, 1958.

#### Medicine

THE registration body for medical practitioners in the United Kingdom is the General Medical Council, 44 Hallam Street, London, W.1. There are a number of examining bodies, and when a student has passed the final examination of one of these bodies he is entitled to provisional registration as a medical practitioner. In order to obtain full registration he must thereafter render satisfactory service for twelve months in appropriate resident appointments in approved hospitals or institutions. Study occupies a minimum of five years after passing a recognised examination in general education and in chemistry, physics and biology.

The principal universities in the U.K. confer degrees in medicine and surgery (M.B., Ch.B. or equivalent). Other examining bodies whose qualifications confer a title to registration

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON and THE ROYAL COLLEGE
OF SURGEONS OF ENGLAND, particulars from the Secretary, Examining Board in England, Examination Hall, Queen Square, London, W.C.1.

THE SOCIETY OF APOTHECARIES OF ONDON, particulars are obtainable LONDON, particulars are obtainable from the Registrar, Apothecaries' Hall, Black Friars Lane, Queen Victoria Street, London, E.C.4.

THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH and THE ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW, particulars are obtainable from the Secretary, Scottish Conjoint Board, 18 Nicholson Street, Edinburgh.

#### Dentistry

THE practice of dentistry is restricted by Act of Parliament to persons registered in the dentists register or under the Medical Acts, but the provision of general dental services under the National Health Service Acts is confined to persons registered in the dentists register. Possession of a degree or licence in dental surgery granted by a university or other licensing corporation in Great Britain or ing corporation in Great Britain or Ireland carries with it the right to registration in the dentists register kept by the General Dental Council, 44 Hallam Street, London, W.1. Degrees and or licences in dental surgery are granted by Bristol, Durham, Leeds, Liverpool, Manchester and Sheffield Universities and by Queen's University, Belfast. Degrees only are granted by Birmingham, London, Edinburgh, Glasgow, and St. Andrews Universities and by the National University of Ireland and by Dublin University. Licences are granted by:—ROYAL COLLEGE OF SUR-GEONS OF ENGLAND, Lincoln's Inn Fields, London, W.C.2; ROYAL COL-LEGE OF SURGEONS OF EDINBURGH, 18 Nicholson Street, Edinburgh, 8; ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW, 242 St. Vincent Street, Glasgow; ROYAL COLLEGE OF SUR- GEONS IN IRELAND, St. Stephen's Green, Dublin.

The course usually extends over five years (including one year devoted to chemistry, physics and biology).

Registration in the Republic of Ireland is in the hands of the Dental Board, 57 Merrion Square, Dublin.

#### **Optics**

THERE are four examining bodies concerned with the career of ophthalmic opticians: The Worshipful Company of Spectacle Makers, the British Optical Association, the Scottish Association of Opticians, and the Institute of Optical Science. The qualifying course lasts three years at an approved college plus one year's clinical practice. Further details from the Association of Optical Practitioners, 65 Brook Street, London, W.1.

#### Chiropody

To gain admission to the National Register of Medical Auxiliary Services, it is necessary to pass the examination of the Society of Chiropodists, 8 Wim-pole Street, London, W.1. The pass certificate of the Society is also accepted by the Ministry of Health and the Department of Health for Scotland as qualifying for employment within the National Health Service.

#### **Photographics**

THE examinations of the Photographic Dealers' Association have for their object the raising of the standard of efficiency of assistants, both in practical photography and salesmanship applied to the business of the photographic dealer. The examinations, which can be taken by retail photographic dealers and assistants, will comprise intermediate and advanced grades. In the intermediate examinations, candidates will be required to give written and oral answers to the questions set on such subjects as simple cameras, accessories, sensitised materials, chemicals, etc. All successful candidates in the intermediate examination receive a certificate. In the advanced examination, which is divided into two parts, Part I, general, and Part II, cine, candidates obtain a diploma for passing either part. That examination is open only to those who have passed the intermediate, and comprehensive knowledge must be shown in the following subjects: - General - miniature cameras, processing, enlarging, colour and cine photography, etc., to a more advanced standard; cine — principles of amateur cinematography, sensitometry, films and processing, exposure, cameras and projectors, etc.

The examinations which consist of three parts, written, oral and practical, are restricted to those engaged in retail photographic dealing, and the examination is designed, in each of its three parts, to test the merit of candidates from the standpoint of retail photography. The written paper calls for a sufficient standard of knowledge for the candidate to be able to give satisfactory and reliable technical advice to a customer. The practical test is primarily one of the technical ability in using everyday photographic materials correctly.

The oral examination provides the opportunity for the candidate to demonstrate his abilities as a photographic dealer's assistant.

Holders of the P.D.A. diploma become automatically eligible for associate membership of the Association on application, and if and when they open an approved retail shop, are automatically entitled to full membership of the P.D.A.

The examinations take place in London, Manchester, Dublin and a suitable centre in Scotland. The entrance fees are: -Intermediate examination, £2 2s.; advanced examination, £3 3s.

Candidates must pass in all three parts of the examination, but in the intermediate examination a candidate who fails in any one section may re-enter subsequently and within two years for that section only. If the section failed is the practical only, a candidate may submit further samples of his practical work after a period of six months from the date of the examination. In the advanced examination, a candidate who fails in the practical section only, may re-enter for that section only. Details of the syllabus may be obtained from the general secretary of the Association, P.D.A. House, 46 Bloomsbury Street, London, W.C.1.

#### DEVELOPMENTS IN THE UNITED STATES

#### A New Herbicide

A new herbicide, ethyl N,N-di-npropylthiolcarbamate for pre-emer-gence application has been developed by the Stauffer Chemical Co., New York. It has proved effective against all grassy weeds and many broad-leaf weeds.

#### Granular Superphosphate

A new one-step process for making granular triple superphosphate is being developed in the United States by the Tennessee Valley Authority, Knoxville, Tennessee. The product is becoming increasingly popular with farmers because it is easier to drill or apply than the powdery non-granular superphosphate, and less of it is lost through wind action.

#### Soil Sterilisation

A patent covering a new method of temporarily sterilising soil has been assigned to Stauffer Chemical Co., New York. In their research the inventors found that certain dithiocarbamates (for example, methyl ammonium Nmethyl dithiocarbamate and sodium N-methyl dithiocarbamate) could be used in simple water solution to con-trol plant and animal life in soil. The class of compounds discussed in patent, the company said, are stable in concentrated solutions but when diluted with water and applied to the soil they break down to form a volatile fumigant. That gas kills weeds, weed seeds, fungi, nematodes and certain other soil insects and related pests but within a matter of days decomposes into completely harmless compounds. Thus the soil is ready for crop plantings within a short time after it has been rid of all harmful organisms. This offers distinct advantages to farmers and market gardeners whose capital outlay in delicate seedlings may be considerable.

## The Three-year Qualifying Course

WHAT MEMBERS THINK OF IT

TO test the reaction of members of the Pharmaceutical Society to the Council's announcement that the present twoyear course leading to the Pharmaceutical Chemist Qualifying examination is to be replaced in 1958 by a three-year course, THE CHEMIST AND DRUGGIST sent out a questionnaire. The questions which it posed are given in the panel on this page. So far as possible they were framed to permit free expressions of opinion uninfluenced by any suggestion of colour or bias in the questions themselves. How far that aim was achieved must be a matter of opinion, but it is fair to say that it is an aim not at all easy to achieve, as anybody can find out by trying to frame a set of questions in similar vein.

At all events the response was extremely good, and the number of responders who made use of the remarks column proved that the subject is regarded as vital and important. Any apparent apathy or quiescence on the subject in recent months is—well, only apparent.

#### Recruitment

Twice as many of those who answered think that the recruitment of pharmacists would be curtailed as thought it would not. Mr. T. W. FISHER considers that a drop in recruitment has already been seen this year in the smaller number of inquiries for practical training; Mr. O. Griffiths that entrance at H.C.E. level, with a further four years [including practical] is unrelated to requirements; and Mr. ALEC I. MORLAND that young people with the ability to become pharmacists will choose "better" professions. The point of view of the student himself is considered by Mr. George Vale, who asks how many can afford a period of five years before becoming fully qualified; Mr. T. R. Gover that a student who might manage two years may be deterred by three; and Mr. F. S. Kingsley that scientific careers in industry offer excellent prospects at less cost. Mr. G. Raine does not consider the problem a serious one, because too many pharmacists are engaged on non-professional work, but Mr. J. H. Williams thinks pharmacy holds no incentive for such a rigorous course of training.

On the other side MR. C. J. STOCK-WELL points out that more financial assistance is given to students nowadays; MR. T. D. WHITTET that the number of applications for places in the pharmacy schools keeps up; MR. H. B. WILLIAM-SON that the recruitment is already affected as much as it is likely to be; and MR. H. S. GRAINGER that all previous advances in the educational programme have increased recruitment.

As to the quality of the entrant, a typical view is that any person of G.C.E. standard should learn more in three years than in two. "Possibly," say several who completed the form. Those who think the retail side will suffer from the change are three times as numerous as those who do not; the same proportions, but only about half

the actual number, think hospital pharmacy will also be adversely affected. Reverse the figures and you have a measure of the strength of the belief that manufacturing pharmacy will benefit, not suffer, by the change.

The view is overwhelmingly predominant that the three-year course will be by-passed in favour of a university degree, only a handful taking the opposite standpoint. Mr. Albert Howells thinks that that is probably the most serious effect that can arise, and that

#### THE QUESTIONS

Do you consider the three-year fulltime study course will

- a. curtail recruitment?
- h. improve the quality of entrant?
- c. alter the balance of entrants into the various channels (retail, hospital, manufacturing, etc.) to the possible detriment of any of them. If so which?
  - i retail ii hospital
  - iii manufacturing
- d. cause the Society's diploma to he hy-passed in favour of a university degree?
- e. make it more likely that B. Pharm. graduates will become registered pharmacists?
- f. make it less likely that they will register?

Do you consider that the one-year practical training that goes with the new provisions is enough (when taken in conjunction with the extra practical in the college course) to justify admission to the register?

Do you think the three-year Qualifying course will lead entrants to become discontented with the non-professional side of retail pharmacy?

Will it lead to a new type of retail establishment (say more like the most professional types to he found on the Continent)?

Will those who qualify under the new conditions

- a. deserve
- b. command
- c. look in vain for

a higher standard of remuneration than is at present enjoyed by pharmacists?

it is the duty of every member to do all in his power to ensure that it does not happen. Mr. John B. Lloyd describes the by-passing of the diploma as a by-product of the 1947 Education Act and one that the Society is powerless to influence. Mr. K. A. Hume considers that the university degree will continue to carry more weight "even under the new regulations." Mr. T. D. Whittet thinks that the bias towards the degree may be minimised by giving the syllabus a distinctive character "not just a copy of the degree," while Mr. W. F. WILKINSON suggests that graduates will regard the diploma more favourably, as being more on a par with their

degree. Mr. F. Marshall believes that the diploma will become obsolete in the years to come. Opinion is evenly divided on whether, under the new provisions, B.Pharm. graduates are more likely to take up membership of the Society and whether a single year of practical training in a pharmacy is enough. One view is that in the long run the situation will be governed by economic factors, since a temporary dearth of pharmacists will improve the structure of remuneration and attract the graduate to practise as a pharmacist. Mr. C. H. Preston Robinson holds that, when manufacturing, teaching and representative work have taken their quota of graduates, the remainder will have to register to find employment: under that compulsion, they will feel no loyalty to their professional organisations.

#### Practical Training

Replies given to the question on practical training are for the most part emphatic and terse, particularly on the part of those who consider that a year of such training is not enough. Remarks, when added, concerned themselves with, of course, the duration of training, but also with its timing and quality. Examples are: "Impossible to learn how to handle and advise sick people or customers in under two years"; "at least two years' practical training is required. Also I should like to see periods of practical training made compulsory during the long summer vacation "; "the year [if any] spent in retail before college is one of the most valuable of the whole course"; and "not enough unless part of the third year at college includes some instruction in business management, business ethics, staff control, public relations." There is some attack on the There is some attack on the one-year period by criticism of its results. "There is far too much theory and book work in recent products; dispensing and manufacturing work done is slapdash. There is a lack of finish, orderliness and neatness such as was produced during a good apprentice-Some who responded dealt with economic aspects, whether from the entrant's or the employer's point of view ("the graduate cannot afford more time before registration"; "one year is enough provided the student is not regarded as cheap labour ").

Some of those who answer "Yes"

Some of those who answer "Yes" do so with a proviso, such as "but barely so. To make it longer would be a serious burden, however. The year spent in college will be more beneficial than a second year of apprenticeship"; "answered with regret—frankly young medical practitioners survive a post-graduate period of equal ignorance"; "provided that they are not encouraged to think that a fully experienced pharmacist emerges from the examination rooms"; "although I would prefer that the one year of practical training be taken after taking the entrance examination." One suggestion made is that the practical should be taken in all branches of pharmacy. A testimonial to present post-graduate apprentices is

given by one pharmacist who writes "I have had two and shortly will have another; one year is definitely enough for the mentally alert student of

Non-professional and Financial Aspects

Discontentment with the non-professional side of retail pharmacy is revealed to be so prevalent among graduates that the new conditions are hardly likely to make it more so. One pharmacist (a hospital pharmacist) writes:
"I hope so, anyway," but that reaction
is unique. Another (MR. G. BRYAN)
writes "They cannot afford to! They are much more likely to become discontented with the financial rewards of the professional side of retail pharmacy." "Unfortunately," writes MR. GEORGE VALE, "it is the non-professional side which is the most profitable, therefore with fewer entrants-and thus fewer qualifieds—the trend will be towards one or two central dispensing pharmacies, the remainder changing over to drug stores." Several hope -without evident confidence-that discontent with non-professional aspects may eventually call into existence a more professional pharmacy (on certain continental models), though there is a general recognition that that development is inseparable from limitation of pharmacies—a method described by some as "impracticable."

We are rather taken to task by many who replied for putting a question on remuneration in an inquiry on educa-tional policy, as if the two things are

and should be unconnected. It has to be accepted that the law of supply and demand is a much more potent factor than educational accomplishments in determining salary levels. Nevertheless the point is not without bearing on policy, so long as there are other pro-fessions which, for little greater sacrifice of time, money and effort on the part of the student, offer prospects of higher rewards. If the number of registered pharmacists declines, then temporarily the remuneration of the remainder may rise, but in the long run the likelihood of a less-well-paid technician class being promoted by the Government, as operators of the National Health Service, becomes more likely. That, at least, is the argument of a number of our correspondents.

#### CORRESPONDENTS' LETTERS ON THE CHANGE

#### Advice to Would-be Entrants

SIR,—It must be obvious that the "three-year" rule is designed to cut down the numbers of entrants into pharmacy. Economic considerations alone will ensure that. Those who do enter will be of the types to whom economic considerations are not the most important factor, and those with a genuine bent for pharmacy in its academic implications, and therefore least likely to enter retail pharmacy upon registration. In spite of the fact that each successive rise in the standard of the Society's examinations has been followed by an improvement in the quality of the entrant there are, in my opinion, circumstances which cannot be ignored, and which must militate against the success of the scheme to increase both numbers and quality. The condition or prospects of any profession or calling can best be judged by the attitude of its leaders and members towards it. So far as the attitude of our leaders is concerned, I do not know of one among those who are fortunate enough to be parents whose children have embraced pharmacy as a career. There may be one or two, but I have not heard of any and, if such there be, they can only be regarded as exceptions. So far as the rank and file are concerned, I cannot do better than quote my own attitude, and that of my friends in pharmacy. None of us would do anything to encourage our sons to follow us. Perhaps "none" is a bit sweeping, but here again the rule of exception prevails. I myself am approached at times by people who wish to enter pharmacy. I supply details without comment, unless I am asked for my opinion. Then I state, invariably, that the time, effort, and cost involved would be better employed in entering into a profession that is not held in such utter contempt by the Ministry involved. If the foregoing statements need justification, may I make the following points. The National Health Service is too expensive, and costs must be cut. The pharmaceutical service is the first section of it, and often the only one, to be attacked. Everybody knows that the best way to lower the cost is to tackle the men who write the prescriptions: the men whose duty it is to dispense them can do nothing. It would appear that the Ministry's officials have neither the intelligence nor the guts to tackle the doctor, and show a commendable discretion in refusing to tackle the enormous wastage in the hospital service, with its huge staffs, constant overlapping and-worst of all—the forcing of a hospital group to spend its entire allocation or suffer a cut in future years, thus penalising thrift. The contemptuous attitude of the Ministry and its officials is further evidenced by the recent appointments to the committees to consider ways and means of reducing the costs of the pharmaceutical service. So far as I can see, there is not a single practising pharmacist on either the English or Scottish sections. In other words, the people who could give a constructive contribution are barred. And mark this: all this useless fuss is to cut a service that costs less than £1 per head per annum of the insured populationin these days of antibiotics and other expensive drugs a very modest sum.

The last charges imposed (to save money!) of one shilling per item, which must have been known by the Ministry at the time it was granting its one-anda-half-years' retrospective payment on a five-year claim (only a fraction of the increase warranted) have failed completely. Any saving of cost and fees has, in my opinion, been swamped by the marked increase in the number of insured patients, who have been forced, unwillingly, on to National Assistance. That is evidenced by the huge numbers of EC57's now being issued. The people using them, having been forced to take the plunge, will continue to enjoy their benefits for years, if not for life. Meanwhile, as we know, Panel notes are being issued from the surgeries, and prescriptions, particularly for children, are being torn up. What a rod in pickle for future years! The position of hospital pharmacy carries its own warning. The persistent payment of salaries below the economic level, with constant staff shortages, and the stubborn refusal to raise the standards, indicate, in the opinion of many pharmacists, a definite policy: that in future years Health Service dispensing shall be done by a salaried staff, and that the status of that staff shall be at the level of the present hospital staff, namely somewhat less than the clerical grades. As this is being written, statements are being made of the intention to fight inflation. Social services are to be cut further. We know what that implies. Again the pharmaceutical service will be attacked, with a further increase in the feeling of frustration and insecurity amongst pharmacists. None of the allied services will suffer. They carry guns of a calibre too powerful to be engaged. The target will be the most despised and unconsidered section, and to be despised by bureaucracy (itself in essentia a parasite upon the body politic) indicates undeniably the present and future status of pharmacy. The fortunate ones are those whose businesses are most independent of the professional side: those whose dispensing practice is negligible. Liverpool, 5 J. P. Mul

J. P. MURPHY

#### Force of Circumstances

SIR,-In my opinion the decision of the Pharmaceutical Society's Council to replace the two-year course by one of three years, and at the same time to raise the entrance standard, is one that has been forced upon it by circumstances. Had the Society refused to recognise the change that has taken place in our educational system the value of its diploma would rapidly become debased in a world of rising standards. Let us look at the present possibilities open to a grammar-school boy who has inclinations towards pharmacy. He takes the General Certificate of Education (ordinary level) at about sixteen, and, if he obtains passes in the required subjects, has two courses open to him:

(a) to leave school and continue his studies at the local technical college, for which he may possibly have to pay fees;

(b) to stay on at school for two years (free of charge) and take the G.C.E. (advanced level).

A headmaster with any sense will surely advise the latter course, first of all because passes in the required subjects will secure exemption from the Society's Intermediate examination, but more important still because County and State scholarships and grants are awarded on the results of that examination. Moreover, passes at a reasonably good level will satisfy university entrance requirements, and the system

of scholarships and grants is such that any boy who can obtain university entrance is almost certain of financial assistance from one source or another. If a university decides that pharmacy is a suitable discipline for the award of a degree, there is little that the Society can do about it. One cannot blame the boy who decides to enter pharmacy by that path, and it is common knowledge that the number doing so continues to increase year by year. G.C.E. (advanced level) can therefore be regarded as an examination that weeds out those whose academic attainments are not sufficient to enable them to profit by a degree course, and presumably such students would at present proceed to take a twoyear course at a technical college. Surely if the Society is to survive it must follow the example of the Royal Institute of Chemistry, and advance its standards to ensure that it does not become the professional organisation of a lower grade of pharmacist. That is already happening, and if something had not been done we should very soon have had "technicians" in pharmacy, though not quite in the way that seems to have been envisaged up to now. Manchester, 13 JOHN B. LLOYD

Technicians the Sequel?

SIR,—In framing its policy statement the Education Committee still appears to be evading a fundamental question, namely "The shape of pharmacists to come." What is the niche into which the future pharmacist must fit? It seems fairly certain that, when faced by the choice between the Society's diploma course and a degree course, both of three years' duration, the majority of students will opt for the degree course. It seems equally certain that the majority of graduates will seek employment in research and industry, in order to make best use of their not inconsiderable learning. What, then, of the National Health Service? Doubtless the Government will insist on the dispensing of prescriptions being carried out by or under the supervision of trained persons, and if the Society cannot produce them in the requisite number then the Government may well feel compelled to inaugurate a class of pharmaceutical technicians, of the type suggested in the Linstead report. retail pharmacists have been, and probably still are, opposed to the creation of such a category, but that would appear, nevertheless, to be the natural sequel to the present educational policy. the Council of the Society is genuinely convinced that in, say, fifteen to twenty years' time there will be no place for the retail pharmacist, as at present understood, then it is perfectly right in attempting to cater for the needs of the "new-look back-room boy" who will be the future professional pharmacist. Nor should the Council abdicate its responsibilities in respect of the National Health Service, but should do something about "pharmaceutical technicians" before they are forced upon us from external sources. If, on the other hand, the Society believes in the continuity and development of the present type of retail pharmacist, it should provide a course of instruction and examination

designed to that end. We have the right to know where the present policy is intended to take us—after all we, the retail pharmacists, pay the piper.

Pontefract DONALD ROYCE P.S. As I am chairman of Leeds and District Branch of the Pharmaceutical Society, I would like to emphasise that the foregoing is an expression of my personal opinion and does not necessarily represent the view of the Branch.

#### **Inherent Dangers**

SIR,—By over-simplification of its questionnaire, THE CHEMIST AND DRUG-GIST has, in my opinion, given an unintentional bias towards the undoubted advantages of increased professionalism and remuneration that might be expected to result from the new threeyear course, as little opportunity was given to express the dangers inherent in the policy being followed by the Council of the Pharmaeeutical Society. The Society's new diploma course and the degree course being of equal standard and duration, it is only to be expected that the majority of entrants to pharmacy will opt for the degree. In-corporation of forensic pharmacy and practical training into the degree course will be sought for and eventually obtained by the universities, after which registration as a member of the Society will become a mere legal formality. Parliamentary legislation would soon dispense with that formality by incorporating the words "Member of the Pharmaceutical Society or Bachelor of Pharmacy," in all its Acts and in the Poisons Rules, and the chief function of the Society would cease to exist. Local authorities and city analysts would devour the functions of shop inspection and control, whilst the organisation of members of the Society would fall to the specialist organisations of the National Pharmaceutical Union, Guild of Public Pharmacists, and Association of British Pharmaceutical Industry. Curtailment of recruiting and increased remuneration will probably lead to larger pharmacies of a more professional character, but that will be at the expense of the present proprietors of smaller businesses, who may be unable to sell on retirement.

K. Roberts

Harrow, Middlesex

#### Completely Professional?

SIR,-The Society seems anxious to alter the status of members with the ultimate object of making them completely "professional." That may be a praiseworthy object, but I consider it very unlikely to succeed. If it does, then the day of the private pharmacy is over, because degree men will consider it beneath their dignity to serve in a shop. Until there is a limitation of pharmacies, the retail pharmacist cannot exist without selling, as he now does, items which show a far bigger return for invested capital than does National Health Service dispensing. My son, who starts a two-year prequalifying apprenticeship in September, will be, I hope, the fourth generation of pharmacists in our family. As I am anxious that he should succeed me here I have deliberately set him on

that course so that he can gain retail experience before studying for his final. Experience has already shown that the one-year post-graduate apprentice has not and cannot have the same grasp of the many problems of the retailer as one trained by the old, tried and proven method. You will gather I feel strongly on this subject. The course the Society is following can have, to my mind, only one ending. It will starve the retail trade of qualified men. The automatic reaction under the new scheme of training will be for the entrants to go into the more scientific side of pharmacy, their first choice being manufacturing, with hospital second. Only if those channels are full will there be a disgruntled spill-over into retail.

PHARMACIST III

#### Eliminating Society's Diploma

SIR,—The action proposed by the Council seems to me to be the quickest procedure for the eventual elimination of the Society's diploma. Realism would surely demand fundamentally a training appropriate to the major endproduct — the retail pharmacist — and unless it is proposed that a high proportion of pharmacies shall cease to be controlled by qualified personnel, then it is fantastic to suggest that 100 per cent. of trainees shall have to aim at degree status. I for one recall my substantial apprenticeship as basic, not only to the all-round professional approach which one may have achieved, but also to the even more significant cultural. humanist outlook which the every-day contacts of retail pharmacy develop. A year of such experience must be a mere token, and one wonders who is the "Cerberus" to whom this is the "sop." One cannot but feel—and retail pharmacy should be warned of it-that the long-term result of the new policy will be the reduction of retail pharmacy to the Continental status, where a relatively small proportion of pharmacies are controlled by highly trained personnel, the rest being under the direction of relatively unqualified people.

REALIST

#### Lack of Practical Work

SIR,—It is satisfying that pharmacy is keeping in step with other professions in having higher standards for the academic training of its students. In many fields of pharmacy, no doubt, a high academic standard is desirable, but is it really necessary for one engaged in retail work? One aspect to be deplored in this ever-increasing academic side of a student's training is the total lack, among some graduates, of pure practical work in a pharmacy. That applies particularly to postgraduate apprentices, who enter a pharmacy bursting with theoretical knowledge, but who have never seen the everyday items sold in a pharmacy except as advertisements in the Press or on television. After all, one cannot ignore the necessary commercial side of pharmacy. The extra year's academic training will most surely deplete the ranks of prospective students unless, of course, the parents are in a financial position to afford the extra year.

C. MELLOR Stockport

#### PHARMACEUTICAL SOCIETY OF IRELAND

#### Monthly meeting of Council

ANY further tributes and messages of sympathy were received by the Council of the Pharmaceutical Society of Ireland on the passing of the late president (Mr. Patrick F. McGrath) at a meeting held in Dublin on July 9. Mr. M. Power (vice-president) was in the chair and other members of Council present were: Messrs. H. P. Corrigan (treasurer), J. Gleeson, T. R. Miller, F. J. Robinson, A. A. Toher, C. J. Cremen, F. Loughman, T.D., J. P. Kissane, J. J. O'Regan, and D. J. Kennelly. Mr. James G. Coleman, B.L. (registrar) was in attendance.

Apologies for absence were received from Miss L. Cunniffe, Messrs. M. Costello, V. McElwee, T. B. O'Sullivan, and G. C. O'Neill. Mr. P. A. Brady, T.D., and Alderman M. L. Cashman who were attending a Dublin Corporation Health

Committee meeting were excused attendance.

#### Tributes to the late Mr. McGrath

MR. MILLER, who was unable to attend the June meeting of Council, said he would like to be associated with the many tributes paid to Mr. McGrath. In that connection he wished to recall the kindly way in which the late president received him on his first attendance at a Council meeting. Although he had not known him very well their late president paid him one of the best compliments he had ever received.

MR. LOUGHMAN, who also was unable to attend the June meeting, said he had known the late president for many years. He was a wonderful personage who had conducted the proceedings of the Council in a splendid way. His friendship was something which he (Mr. Loughman) valued very highly indeed. He would like to be associated with the many expressions of sympathy extended to the late president's family.

THE REGISTRAR reported that a large number of tributes and letters of sympathy had been received since the June Council meeting, including many from individuals.

Those received included the following: -

Mr. F. W. Adams (a secretary and the registrar of the Pharmaceutical Society of Great Britain) wrote: " At the meeting of the Society's Council held this week the president reported with great regret the death of Mr. P. F. McGrath and I was asked to send to you an expression of the Council's deep sympathy with the Pharmaceutical Society of Ireland in this sad event. Frank McGrath had become very well known to a wide circle of British pharmacists through his attendance at British Pharmaceutical Conferences, and, of course, in particular through the prominent part he played in the organisation of the highly successful Dublin Conference last year. The news of his death came as a shock to his many friends in Britain, and it is difficult to believe that his lovable and dynamic personality is no longer with us. British pharmacists share fully with their Irish colleagues in the sorrow which the death of this able leader of Irish pharmacy has evoked.

Mr. E. George (secretary, British Pharmaceutical Conference, Bristol local committee) wrote: "At a meeting of the Bristol Conference committee yesterday reference was made to the tragic loss incurred by your Society on the unexpected death of your president. We know from our experience last year that that means much more to you than the loss of a valued officer. We know that in addition to that Frank McGrath was a personal friend of you all, and one whose loss it will be difficult to replace."

Mr. S. E. Campbell, Londonderry (immediate past-president of the Pharmaceutical Society of Northern Ireland) wrote: "When I opened my copy of THE CHEMIST AND DRUGGIST last night I learned with great sorrow of the passing of Frank McGrath. That was a tremendous shock. I have known him through various Conferences for a good number of years, and I like to think we were always good

friends. I was privileged last year as president of the Pharmaceutical Society of Northern Ireland to attend the great Pharmaceutical Conference in Dublin, the success of which was very much a result of the personality, charm, and organising ability of Frank McGrath."

Mr. H. F. Moore, Belfast, wrote: "Just a few lines to tell you of my sorrow for you all on the death of your

good president, Mr. P. F. McGrath."

Mr. Leslie D. Smith (president of the Proprietary Articles Trade Association) wrote: "I was shocked to read in The Chemist and Druggist this morning of the sudden death of your president, Mr. Frank McGrath, and I would like to extend to your Council the sincere sympathy of my Association in your sad loss.

Mr. Seamus V. Byrne (secretary, Wexford Pharmaceutical Association) wrote: "We in the country have lost a great friend and spokesman, and pharmacy the world over has lost a loyal subject. We hope that his life's work and example will be a beacon light to pharmacy in the future."

Mr. John W. Place (a director, Johnson & Johnson (Ireland), Ltd.) wrote: "Mr. McGrath was without doubt one of the most outstanding figures in pharmacy today, a great gentleman and a fine Irishman."

Reverend Mother Mary Martin of the Medical Missionaries of Mary in a message of sympathy spoke of "the

splendid work he did for the Society."

Mr. Fred Wrigley (general sales manager, The Wellcome Foundation, Ltd.) wrote: "Mr. McGrath's presence at your deliberations will be greatly missed I know, and indeed it will be difficult for you to replace such a good man."

Messages of sympathy were received from amongst many: M. Parat (secretary-general, International Federation of Catholic Pharmacists); the Benevolent Fund Dance Committee (who adjourned their meeting as a mark of respect); Mr. Chris F. Bruton (president, Association of Ophthalmic Opticians of Ireland); and Mr. and Mrs. Eric Brocklehurst, Hull. The International Federation of Catholic Pharmacists mentioned that they had had requiem mass offered for the late president.

The Council decided that greetings should be sent congratulating the Canadian Association on the celebration of its golden jubilee year.

#### National Health Council Representative

A letter was read from the Department of Health asking the Society to nominate a representative on the National Health Council to fill the vacancy caused by the death of the late Mr. P. F. McGrath.

THE VICE-PRESIDENT said he had discussed the matter with Mr. Costello who, he felt, would be the best choice the Council could make to represent it on the National Health Council, and Mr. Costello had agreed to allow his name to go forward. Accordingly he proposed that Mr. Costello should be the representative.

Mr. GLEESON seconded the nomination, which was unanimously agreed to.

MR. Kennelly reported having received a letter from Mr. George A. Dickie (secretary, Aberdeen Branch of the Pharmaceutical Society of Great Britain) enclosing a cheque for £100 towards the deficit incurred in the running of the Pharmaceutical Conference in Dublin in September 1956.

THE VICE-PRESIDENT: This is indeed a generous gesture from our friends in Aberdeen to send us this cheque, which we shall pass to the Conference Committee to deal with.

MR. CORRIGAN said he agreed. The sending of such a cheque was most generous, especially since it was unsolicited.

MR. KENNELLY, who is secretary of the Conference Committee said the cheque would go to the local committee set up by the Conference Executive in London to run the 1956 Conference, and would be used towards reducing the com-

mittee's deficit. They were all most grateful to their good friends in Aberdeen for that kind thought, particularly, as Mr. Corrigan had pointed out, when it was unsolicited.

The Council decided to have its thanks conveyed to the

Aberdeen Branch for its generosity.

Major-General J. A. Sweeney (general secretary, Irish Red Cross Society) wrote expressing the Society's thanks for the decision taken by the chemists of county Dublin to present a cup for competition amongst the men's teams in the county. "The Society," stated General Sweeney, "greatly appreciates this gesture and would be much obliged if you would inform the donors that we are most thankful."

It was reported to the Council that a committee had been set up of Dublin county chemists for the purpose of presenting the cup. Members of the committee are Messrs. H. A. Cole, Sandycove; J. P. Crowe, Dun Laoghaire, B. P. Hickey, Rush; D. J. Kennelly, Dalkey; F. M. Mallen, Sutton; and G. C. O'Neill, Blackrock. A circular sent out by that committee estimated that a subscription of 10s. from each pharmacist in county Dublin (including the borough of Dun Laoghaire) would make it possible to present a cup which would be worthy of the profession. The proposal was submitted to the late president of the Society and received his whole-hearted support. Subscriptions could be sent to any member of the committee or to the secretary, Red Cross Cup Committee, 18 Shrewsbury Road, Ballsbridge, Dublin.

The following, who submitted marriage certificates, were granted change of name in the Registers: Mrs. Catherine Mary Maguire, née O'Connor, L.P.S.I., and Mrs. Kathleen

Mary O'Sullivan, née Hawkes, M.P.S.I.

Dr. Michael M. Ryan, Templemore, and Dr. Azeez Victor Khayat, Haifa, who submitted L.A.H. Certificates, were granted registration as pharmaceutical chemists.

An application by Mr. Joseph G. MacCourt, Iona, Blanchardstown, co. Dublin, to have his name restored to the Register of Registered Druggists was granted.

The reports of the House, Schools, and Law Committees

were submitted and approved.

The following changes of address were notified:—

Mrs. Catherine, M. Maguire, I.P.S.I. to O'Curry, St.

Mrs. Catherine M. Maguire, L.P.S.I. to O'Curry Street, Kilkee, co. Clare; Mr. John Declan Hallahan, L.P.S.I. to Timoleague, co. Cork; Mr. Francis Cecil Hamilton, M.P.S.I. to 22 New King Street, Bath, Somerset; Mr. Desmond Denis Leahy, M.P.S.I. to 5 Greenfield Estate, Coolock, Dublin.

#### Examiners' Report

Reporting on Second Professional examination, the examiners expressed satisfaction with the standard attained in pharmacology and pharmaceutical chemistry. The examiners in pharmaceutics reported that the overall standard attained by candidates was satisfactory. While candidates were able to give the principles underlying such pharmaceutical processes as drug extraction, formulation of ointments, sterilisation, etc., they found it less easy to show clearly in what ways those principles were incorporated in official processes. There was room for improvement in the labelling and packing of products in the practical exercises. Too many candidates were only able to complete four out of five preparations in three hours. In view of the fact that there were no past papers or "practicals" for consultation, the general performance of the candidates was good. The report of the pharmacognosy examiners stated that the standard reached by the majority of candidates was satisfactory. There was good evidence of adequate training and of the students' mastery of the subject. Many candidates tended to present a mass of irrelevant matter in answers to both theoretical and practical questions, and often omitted to give large-scale labelled diagrams to illustrate their answers in both sections of the examination. There was a reluctance on the part of candidates to answer questions dealing with the identification of drugs, or the detection of adulteration, by means of chemical tests.

In pharmaceutics, the examiners were Dr. R. S. Timoney and Professor Kenneth Bullock; in pharmacognosy, Mr. C. S. O'Connor and Dr. J. M. Rowson; in pharmaceutical

chemistry, Dr. E. M. Philbin, and in pharmacology, Dr. O. C. Ward

THE VICE-PRESIDENT said the examiners, particularly the external examiners, Professor Bullock and Dr. Rowson, were pleased with the candidates. They were all of the opinion that the educational courses now being followed in the College were in the right direction.

Mr. Kennelly said that both external examiners felt the students had covered a remarkable amount of ground.

Mr. O'REGAN thought the examiners had presented a fine report, and stressed how important it was that the finished product as it went out from pharmacies to the patients should be well presented.

MR. KISSANE felt there was much leeway to be made up in the matter of how the finished products were presented, and MR. MILLER was of the opinion that that was a matter for the master pharmacist with whom the apprentice got his initial training.

The report of the Society's inspector (Mr. P. O'Briain) upon recent visits to various areas was approved,

#### Fair Trade Commission's Report

In a general discussion on the Fair Trade Commission's report (C. & D., July 13, p. 31) as it affected the Society, MR. LOUGHMAN said the conclusions reached fully justified all the trouble and expense the chemists had put into it. With regard to the dispensary system he thought that the choice of doctor should be available to dispensary patients.

THE REGISTRAR said he had received a letter from Mr. J. A. O'Rourke objecting to certain parts of the Fair Trade Commission's report. Mr. O'Rourke said the Commission referred to retail chemists instead of pharmaceutical chemists.

MR. CORRIGAN: I think in the sense in which it is used in the report the term retail chemist is correct.

MR. ROBINSON: The Commission were dealing with both the wholesale and retail sides. The term retail chemist is used as distinct from a wholesale chemist.

MR. KENNELLY: On the whole I found it a very fair

THE VICE-PRESIDENT: If Mr. O'Rourke feels he has certain objections to report it might be better to take the matter up direct with the Commission.

The registrar reported on the deaths of Messrs. Patrick F. McGrath, M.P.S.I., Arthur Henry Jones, M.P.S.I., Matthew James Parkes, L.P.S.I., Patrick Brooke-Kelly, M.P.S.I., and Dermot Glavey, M.P.S.I.

THE VICE-PRESIDENT said on behalf of the Council he wished to move a motion of sympathy with Mr. Costello in the bereavement he had suffered recently in the sudden death of his nephew, the Reverend Father Costello. Their sympathy also went to the mother, brother and sister of Father Costello in their great loss. He wished also to express their sympathy with the relatives of the late Mr. Brooke-Kelly, who had been a president of the Society, and also with the relatives of the late Messrs. Arthur Jones, Dermot Glavey and Matthew Parkes, all of whom had been closely associated with the Society.

The motions of condolence were passed in silence.

The licence certificates of the following were signed and sealed:—Mr. Denis Bernard McCarthy, Misses Margaret

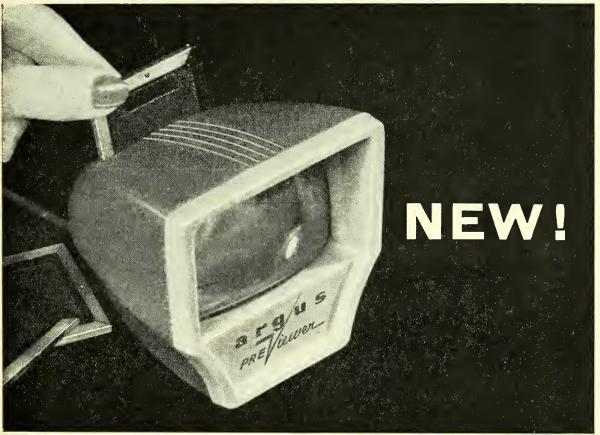
Teresa Doherty, and Mary Frances Shinnick.

The following were nominated for membership: Miss Maire Edwards, 1 Greenlea Drive, Terenure, Dublin; Mrs. Kathleen Mary O'Sullivan, 2 South Main Street, Bandon, co. Cork; Mrs. Catherine Mary Maguire, O'Curry Street, Kilkee, co. Clare; Mr. John Declan Hallahan, Timoleague, co. Cork; Mr. Geoffrey Boyle, Ardara, co. Donegal; and Miss Annie Tobin, Parkmore, Roscrea, co. Tipperary.

Mr. Patrick A. Moran, was elected a member of the

Society.

At a meeting of the Benevolent Fund Committee held at the close of the Council meeting grants totalling £114 for July and August were passed for payment.



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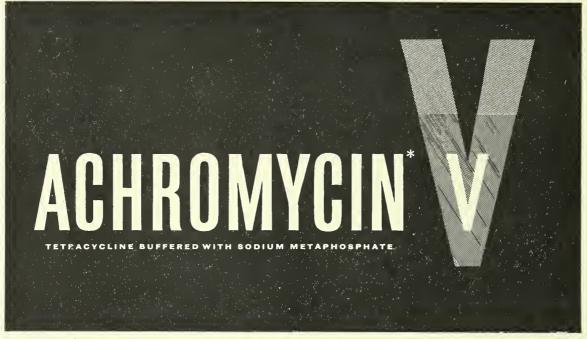
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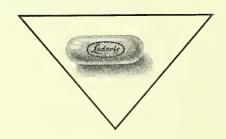
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#### TRADE REPORT

The prices given are those obtained by importers or manufacturers for bulk quantities or original packages. Various charges have to be added whereby values are in many instances augmented before wholesale dealers receive the goods into stock. Crude drugs and essential oils vary greatly in quality and higher prices are charged for selected qualities.

LONDON, JULY 17: Trading in all markets was around the usual level for July. Most prices of Pharmaceutical Chemicals remained fairly steady but ASPIRIN was increased by twopence per lb. for bulk lots.

A large number of chemicals including PREDNISONE and PREDNISOLONE become liable to Key Industry Duty for the first time on July 22 (see p. 55). Export call for CITRIC ACID was steady but supplies are somewhat tight. TAN-NIC ACID also continued in short supply. The Sugar Board, having suspended its surcharge on sugar with effect from July 15, has begun making distribution payments to refiners. For that reason SUCROSE, B.P., has fallen in price by 5s. 10½d. per cwt., dry weight.

AMONG CRUDE DRUGS prime Cape ALOES continued to ease for shipment, with offers at least 5s. per cwt. under those of last week. CLOVES, Cochin GINGER, TURMERIC, CINNAMON and GUM ACACIA were all a shade lower than previously. Among new-crop offers for forward shipment were offers for forward shipment were Lobella Herb quoted at 5s. 3d. a lb. and Tonquin Beans at 8s., both c.i.f. Dearer per lb. were Peru Balsam (by sixpence) and Chinese Menthol (by threepence). The supply position of IPECACUANHA was unchanged except IPECACUANHA was unchanged except that a parcel of Matto Grosso was offered for shipment.

Formosa reduced the export "floor" prices of its CITRONELLA OIL from \$1(U.S.) to 85 cents per lb., f.o.b., with the result that shipment prices fell by about twopence per lb. Ceylon-type oil also eased by the same amount on the spot and by one penny for shipment. Formosa produces about 5 million lb. of citronella oil annually, hitherto about 60 per cent. of world output; but recently China has been competing after stepping-up production on Hainan Island. Formosan PepperMint, now fairly scarce, was marked up by sixpence per lb, in all positions. Bois DE ROSE was threepence dearer at 26s. per lb. but PATCHOULI was lower by one shilling.

#### Pharmaceutical Chemicals

ALOIN.—Spot lots are from 23s. per lb. Amidopyrin.—Minimum rate is 23s. 1d. per lb. with usual differentials for small

Ammonium acetate. — 1-cwt. lots of B.P.C., 1949, are quoted at 4s. 5d. per lb. AMYLOBARBITONE, — B.P.C. is 82s. 6d. per kilo for 50-kilo lots and SODIUM, B.P.C., 92s. 6d. per kilo.

ASPIRIN. — Dearer. Prices are now as follows:—5-cwt. lots, 4s. 9d. per lb.; 1-cwt., 4s. 11d.

BARIUM SULPHATE, — 250-kilo lots of B.P. (x-ray) are now 3s. 3½d. per kilo.

BENZAMINE.—In 16-oz. lots Lactate is 15s. 3d. per oz. and Hydrochloride 16s. 3d. per oz.

BENZOIC ACID.—1-cwt. lots are 2s.  $11\frac{1}{2}$ d. per lb. the Sodium salt is 2s.  $9\frac{1}{2}$ d. per lb. in 1-cwt. lots.

BENZYL BENZOATE. -- 1-ton lots of B.P. grade are 4s. 6d. per lb.

BUTOBARBITONE. — B.P.C. is 95s. per kilo in 50-kilo lots.

CAFFEINE. — Minimum rates for 5-cwt. or 250 kilos and over are as follows (kilo price in parentheses):—Monohydrate, 17s. 6d. per lb. (38s. 9d.); anhydrous 18s. (39s. 9d.); citrate, 11s. 6d. (25s. 3d.); and sodium benzoate, 13s. 3d. (29s. 3d.) and sodium salicylate, 14s. 9d. (29s. 3d.) 14s. 9d. (32s. 3d.).

CALCIUM CHLORIDE. — B.P. crystals are ls. 3½d., and granulated, 10½d. per lb. in 1-cwt. lots.

CHINIOFON.—B.P. 1948 is 67s. per kilo; 50-kilo lots, 62s, 6d, per kilo, The sodium derivative (B.P. 1953) is 99s, 4d, and 92s, 9d, for the same quantities.

CHLOROFORM.—1-cwt. lots in winchesters are 3s, 6d, per lb.; 56-lb., 3s,  $6\frac{1}{2}$ d. In drums, prices are 3s, 4d, and 3s,  $4\frac{1}{2}$ d, per lb. respectively.

CINCHOPHEN.—1-cwt. lots are quoted at 21s. per lb.

COCAINE.—For 16-oz lots the price of the HYDROCHLORIDE is 91s. 6d, per oz, and ALKALOID, 101s. Subject to D.D.A. regulations.

Cyclobarbitone, — B.P.C. and calcium salt in 50-kilo lots are 80s. per lb.

HEXOBARBITONE. -- In 50-kilo lots the price is 110s, per kilo.

IODOFORM.—Powder is 22s. 11d. per lb. in 28-lb. lots; 22s. 3d. in 1-cwt, and 21s. 8d. in 5-cwt, lots. Crystals are 3s. per lb. more than the powder.

LACTATES.—CALCIUM, B.P., is 2s, 9d, per lb. in 5-cwt, lots and 2s, 10d, in 1-cwt, lots; CALCIUM SODIUM for similar quantities is 4s, 5d, and 4s, 6d, per lb.; and SODIUM, B.P., 1932, from 2s, 10d, to 3s, 7d, 3s. 7d. as to quantity.

METHADONE HYDROCHLORIDE. — Price is from 2s, to 2s. 6d. per gm, as to quantity. Subject to D.D.A. regulations.

METHYL PHENOBARBITONE. — B.P. is 85s. per kilo in 50-kilo lots.

OLEIC ACID.—Price of pale distilled is 175 10s, per ton in 3½-cwt, original loaned drums.

OPIATES.—Home trade prices (per oz.) are as follows:-

		35 oz, and over	Under* 35 oz.
		s. d.	s. d.
Codeine			
PHOSPHATE		38 3	39 3
HYDROCHLORIDE		44 0	45 3
SULPHATE		44 0	45 3
ALKALOID		50 9	52 0
Morphine			
ACETATE		43 6	44 9
HYDROCHLORIDE		43 6	44 9
SULPHATE		43 6	44 9
TARTRATE		52 9	54 3
ALKALOID		52 9	54 3
ETHYLMORPHINE			
HYDROCHLORIDE		46 9	48 0
ALKALOID		54 9	56 0
DIAMORPHINE	- 0		
HYDROCHLORIDE		47 3	48 6
ALKALOID	1.7	52 0	53 3

Subject to D.D.A. Regulations.

\*Containers below 35 oz. 1s. 6d. per container.

PAPAVERINE. — Synthetic HYDROCHLORIDE is 250s, per kilo.

PARAFFINS. — Prices to wholesale distributors are: — Liquid: Heavy, 8.6. £107 17s. 6d. per ton; LIGHT, B.P. £87 15s.; Technical White oils, £79 5s. for the LIGHT and £92 15s. for the Medium all in 40-50 gall, returnable loaned drums, delivered U.K. Soft: White, medium consistency is now £110 15s. per ton. White, soft consistency, £107 7s. 6d., and

YELLOW, £88 10s. all B.P., in non-returnable drums delivered.

PETHIDINE HYDROCHLORIDE. — B.P. 100-gm. lots are now quoted at 100s, Subject to D.D.A. Regulations.

PHENACETIN. — In 5-cwt. lots makers' price is now 6s. 8d. per lb.; 1-cwt., 6s. 9d.

PHENAZONE. — Imported material minimum rate, 14s. 8½d. per lb.

Phenobarbitone. — 50-kilo lots 42s. 9d. per kilo and SODIUM, 46s.

POTASSIUM BROMATE.—In 5-cwt, lots the price is 5s. 3d. per lb.

POTASSIUM HYDROXIDE.—B.P. sticks are from 6s, 8d, per lb. and pellets, 5s, 1d.; technical, flake, 1s, 4d.

POTASSIUM 8-HYDROXYQUINOLINE SUL-PHATE.—1 kilo is 47s. 1d. and 50 kilos, 44s. per kilo.

Procaine hydrochloride. — 1-cwt. lots are 30s. per lb.

SODIUM ACETATE.—B.P.C. in 28-lb. lots is 25, 4d. per lb.; 1-cwt. 2s., and 5-cwt., 1s. 11d.

SODIUM BROMATE,—1-cwt. lots are quoted at 9s. 9d. per lb.

SODIUM CARBONATE. — B.P.C. exsiccated is 70s, per cwt.

SODIUM CHLORIDE. — Re-crystallised is 25s. per cwt. and B.P., 42s.

SODIUM PERBORATE. — Prices (per cwt.) are 145s, 9d, in 1-cwt, kegs; 138s, 3d, in 1-cwt, bags for B.P.C. (minimum 10 per cent, available oxygen). Other strengths pro rata. The PERBORATE MONOHYDRATE testing 15 per cent, available oxygen is 309s, 9d. per cwt.

SODIUM PERCARBONATE. — Prices (per cwt.) about 166s. 9d. (bags, 7s. 6d. lower) for minimum 12½ per cent. available oxygen.

Sodium phosphate. — B.P.C. powder is 2s. 3d. per lb.

SODIUM SALICYLATE.—Rates are now:—1-ton lots in bulk, 3s. 7d. per lb.; 5-cwt., 3s. 8d.; 1-cwt., 3s. 10d.

SODIUM SULPHATE. — Makers' prices for B.P. range from £11 10s, to £18 17s, 6d. per ton as to crystal and quantity, ex works.

SULPHACETAMIDE.—Quotations (per lb.) for 1-cwt, lots are 24s, 6d. The Sodium derivative is 30s.

SULPHAGUANIDINE.—Manufacturers' rates for 1-cwt. lots are about 14s. 6d. per 1b. SULPHANILAMIDE.—Manufacturers' rates

are from 7s. per lb. SULPHATHIAZOLE, - Price (per lb.) for 1-cwt, lots is 16s, 6d.

TANNIC ACID. — The B.P. levis, ex ether is quoted at 7s. per lb, for 5-cwt, lots and 7s. 3d. per lb, for 1-cwt, The B.P. powder is 6s. 9d. per lb, in 1-cwt, lots.

Theophylline.—Alkaloid, anhydrous, is quoted at 20s, per 1b.; aminophylline, 18s, 6d, per 1b.

ZINC CARBONATE. - In 1-cwt, lots the price is 1s.  $9\frac{1}{2}$ d. per lb.

ZINC CHLORIDE. — B.P.C., cake from 4s. 6d. to 4s. 10d. per lb.; sticks from 5s. 10d. to 6s. 2d. per lb. Technical, 115s. per cwt.

Zinc oxide. — Rates for B.P. quality are: 2-ton lots £107 per ton; 1-ton, £108; 5-cwt., £110; and under 5-cwt., £117.

ZINC PEROXIDE. — Price (per lb.) for 1cwt. lots of B.P. is 5s. 3d.

ZINC SULPHATE.—B.P. in 1-cwt, lots is quoted at 1s. 9d. per lb.; technical, 60s.

#### Crude Drugs

ACONITE. — Spot supplies of Spanish napellus are 3s. 3d. per lb., duty paid.

AGAR.— $Kob\acute{e}$  is 12s.  $4\frac{1}{2}d$ . per lb., duty paid. Shipment, 10s. 6d., c.i.f.

ALOES. — Cape prime for shipment is 280s, per cwt., c.i.f.; spot, 310s.

Aniseed (STAR). — Chinese is 160s. per cwt. nominal, spot.

BALSAMS.—Quotations (per lb.) are:—
CANADA: Spot value 28s.; new-crop for
July shipment, 26s., c.i.f. COPAIBA, Para
is from 7s. 9d. to 11s., duty paid, PERU,
10s. 6d., duty paid (no c.i.f. offers). ToLu
(genuine as imported), 27s. 6d.; B.P.,
17s. 6d. spot 17s. 6d., spot.

BELLADONNA.—Herb is 2s, 6d, per lb. on the spot. Root, 1s, 10d, spot; shipment, 1s. 3d., c.i.f.

CAMPHOR. — B.P. POWDER is from 5s. 3d. per lb., duty paid. TABLETS, 4-oz. are 5s. 9d., c.i.f. and 6s. in bond.

CASSIA BARK. -- Whole on the spot is now quoted at 135s. per cwt., in bond, and broken, 115s. in bond. For shipment broken No. 1 is quoted at 128s. 6d., c.i.f., and whole at 135s., c.i.f.

CINNAMON.—Ceylon for shipment (c.i.f.) per lb., OOOO, 7s. 11d.; OOO, 7s. 8d.; OO, 7s. 7d.; seconds, 6s. 3d.; featherings, 2s. 6d.; quillings, 4s. 4½d.; chips, 1s.

CLOVES. — Zanzibar on the spot are quoted at 3s, 5½d, per lb. Shipment, 3s, 2d., c,i,f.

COCHINEAL. — Silver - grey Peruvian 9s. 6d, per lb. Canary Isles black-brilliant, 25s. 6d., no silver-grey.

GINGER.—African on the spot is 155s. per cwt. and July-August shipment, 127s, 6d., c.i.f. Jamaican No. 3 on the spot is offered at 580s, and shipment at 560s., c.i.f. Cochin spot, 122s. 6d.; shipment, 107s. 6d., c.i.f.

GUM ACACIA. — Kordofan cleaned sorts are 140s. per cwt. on the spot; afloat 127s., c.i.f.

HONEY. — Australian light-amber is 120s, to 125s, and medium-amber, 112s, 6d, to 115s, Argentine 127s, 6d, to 132s, 6d,; Jamaican, 145s, to 150s., all per cwt., on

IPECACUANHA.—Panamanian on the spot 54s. per lb. ex wharf. Colombian for shipment is 62s. 6d., c.i.f. and Matto Grosso, 61s., c.i.f

JALAP ROOT — Mexican is cleared on the spot, no forward offers.

KARAYA.—No. 1 gum on the spot is now quoted at 245s, per cwt, and No. 2 at 205s.

Kola Nuts, — Jamaican are offered at about 8d, per lb., spot. and  $6\frac{1}{2}$ d., c.i.f. African,  $6\frac{1}{2}$ d. spot and  $4\frac{1}{4}$ d., c.i.f.

— Anhydrous, B.P. is from LANOLIN 175s. to 190s. per cwt. and HYDROUS, B.P., 150s. to 170s.

Liquorice. — Natural root: Anatolian Eligobrice: — Natural root: Anatolani s 47s. per cwt., Russian, scarce at 52s, 6d, Block juice: Anatolian, 200s, per cwt.; Chinese and British, 195s, on the spot. Italian stick from 310s, to 476s, per cwt. Spray-dried extract, 2s. 9d, per lb.

LOBELIA HERB. — Spot offers are from 5s. 9d. to 6s, per lb. New-crop for shipment, 5s. 3d., c.i.f.

MACE. — Whole on the spot is from 22s. 6d. per lb.

MENTHOL.—Chinese. Spot is 53s, 6d, per lb., duty paid; August-September shipment, 47s. 3d. Brazilian, spot, 42s., duty paid; shipment, 40s., c.i.f. Formosan, 44s, 6d., c.i.f.

MERCURY. — Price per flask (76-lb.) is £90 on the spot.

NUTMEGS. — West Indian 80's not quoted; sound unassorted, for shipment 15s. 9d. per lb.; defectives 10s., f.o.b.

ORANGE PEEL. — West Indian bitter quarters are 11d. to 1s, per lb.; Spanish 1s, to 1s, 3d.; thin-cut Tripoli, 2s, 3d.

PAPAIN.—East African grade 2 is 25s, per lb., spot; No. 1 unobtainable. Ceylon white, 26s., c.i.f.; brown, 22s. 6d., c.i.f.

PEPPER. — White Sarawak is steady at PEPPER, — White Sarawak is steady at 2s. 4½d, per lb. on the spot, with July shipment at 2s, 3d., c.i.f. Black Sarawak, spot, 1s. 9d, per lb., July shipment, 1s. 7½d., c.i.f. Black Malabar unchanged at 210s, per cwt. on the spot; prompt shipment, 202s. 6d., c.i.f.

PEPPERMINT LEAVES. - Dutch for shipment are offered from 2s, 6d, to 3s, per lb., c.i.f.

PIMENTO. — Spot is 495s, per cwt, with forward at 450s., f.o.b.

PODOPHYLLUM. — *Emodi* is 165s, per cwt., c.i.f. *Peltatum*, 4s. per lb. spot, and 430s, per cwt., c.i.f., for shipment.

RAUWOLFIA. — Serpentina is 4s. 3d. per lb., c.i.f., and vomitoria, 2s. 3d., c.i.f.

RHUBARB.—Quotations for Chinese are from 6s. 6d. to 9s. 3d. per lb., as to quality.

QUINCE SEED. — Spanish is offered at 5s, 6d. per lb., spot.

SAFFRON.-Mancha Selecta is 250s, per lb., on the spot.

SARSAPARILLA.—Jamaican native red on the spot is 2s. 9½d, per lb., and for shipment, 2s. 8d., c.i.f.

Sassafras.—Selected bark is 5s. per 1b. SASSAFRAS.—Selected bark is 5s. per lb. SEEDS.—(Per cwt.). ANISE.—Cyprian, 170s.; Bulgarian, 146s., duty paid, CARAWAY.—Dutch. 115s., duty paid, CELERY.—Indian unchanged at 180s., on spot. CORLANDER. — Spot: Moroccan, 90s.; Russian, 65s.; Polish, 57s. 6d., duty paid. Shipment: Moroccan is reported firmer at 65s., c.i.f. CUMIN.—Firm. Spot: Cyprian is 180s. and Iranian, 175s., duty paid. DILL. — Indian unchanged at 65s., spot. FENNEL. — Indian, 125s., spot. FENNEL. — Indian, 67s. 6d., and Moroccan, 65s., duty paid. MUSTARD.—English, 60s. to 75s. according to quality.

SENEGA. — Spot is 18s. per lb. with

SENEGA. — Spot is 18s. per lb. with shippers asking 18s., c.i.f.

SENNA. — *Tinnevelly* LEAVES, prime No. 1, 1s. 5d. per lb., f.a.q., No. 3, 10d.; PODS, manufacturing, 1s, 3d. Special green, 2s. spot; new-crop f.a.q., 1s. 1d., c.i.f. *Alexandrian* pods available from 1s. 6d. to 3s. 6d. per lb., with hand-picked at up to 6s. to 6s.

Shellac.—F.O.T.N. 210s. per cwt.; F.O. No. 1, 230s.; fine orange, 250s. to 310s.

SLIPPERY ELM. — Grinding quality bark is 2s, 6d, per lb.

SQUILL.—White is offered on the spot at 57s. to 62s. 6d.

STRAMONIUM.—Indian LEAVES are 70s. per cwt., and European 80s, on the spot.

STROPHANTHUS.—Kombé on the spot is 7s, 9d. per lb, for the 100 per cent.; Gratus is unobtainable on the spot.

STYRAX. — Scarce on the spot, Price nominally 8s. 9d. per lb. No shipment offers.

Tonquin Beans. — Para on the spot are cleared; prompt shipment offered at 10s. 6d. per lb., c.i.f.; October-November,

TRAGACANTH.—No. 1 ribbon is £165 to £170 per cwt., No. 2, £145 to £150.

TURMERIC.—Madras finger on the spot is 60s.

VALERIAN ROOT. — Dutch for prompt shipment is 182s. per cwt., c.i.f., and Belgian, 190s., c.i.f. Indian on the spot is 135s, per cwt.

VANILLIN.—Rates (per lb.) are now:— 5-cwt lots, 25s. 3d.; 1-cwt., 25s. 6d.; 56-lb., 25s. 9d.; smaller quantities, 26s. WITCH HAZEL LEAVES. — Spot supplies are 2s. 3d. per lb.; prompt shipment, 2s. 1d., c.i.f.

#### Essential and Expressed Oils

ALMOND.—British oil is 11s, per lb.; imported, 10s.

AMBER.—Rectified on the spot is 1s, 6d.

Bois DE Rose.—Brazilian is 26s. per lb. on the spot and 25s., c.i.f.

CADE. - Spanish is 3s. 6d. per lb. for drum lots.

CAJUPUT, — Spot supplies are from 10s. 6d. per lb.

CALAMUS.—Spot quotations are 62s, 6d. per lb.

CITRONELLA.—Ceylon, spot, 5s.; July-August shipment, 4s. 6d., c.i.f. Formosan, July-August shipment, 6s. 7½d. September-October, 6s. 4d., c.i.f., and afloat, 6s. 9d.

CLOVE.—Madagascar leaf is 7s. 11d. per lb., duty paid and 6s. 10d., c.i.f., for shipment. Rectified B.P., 17s. 6d, 87-88 per cent., 10s. 6d. Distilled bud oil, English, from 28s. 9d. to 35s. as to quantity.

CUBEB.—Spot supplies are offered at 45s. per lb.

FENNEL.—Spanish sweet on the spot is quoted at 10s. per lb., with Russian at 22s, 6d.

GERANIUM.—Bourbon is 115s, per lb. on the spot and Algerian, 97s, 6d.

JUNIPER BERRY. - B.P.C. oil is from 12s. 6d. per lb. and Jugo-Slavian, 14s. on the spot. English-distilled is 155s. JUNIPER WOOD, from 5s.

LAVENDER.—French oil is from 55s, to 80s. per lb. as to make.

ORANGE.—Spot quotations of sweet oil ORANGE.—Spot quotations of sweet oil include Floridan at 4s. per lb.; Californian, 9s.; West Indian, 7s. 6d.; South African, 7s.; West African, 15s. 6d. For shipment, proprietary brand Californian cold-pressed U.S.P., 13s. 2d., c.i.f. Terpeneless is 200s. per lb., spot and bitter, 21s. 6d. per lb.

OTTO OF ROSE. - Turkish is £250 per kilo.

Palmarosa.—East Indian, 45s., spot, and 39s. 6d., c.i.f.; Formosan, 40s.

PATCHOULI, — Penang is 32s., in bond, and 31s., c.i.f.

Pennyroyal. — Spot 17s. 6d. per lb., duty paid. - Spot is quoted from

PEPPERMINT.—Arvensis: Chinese is 28s, per lb. on the spot and 27s. 3d., c.i.f. Brazilian, 18s, 6d., spot, and 17s. 9d., c.i.f. Formosan, July-August, 18s, 3d., c.i.f.; spot 19s. 6d. Italian "Mitcham" type oil on spot is from 52s, 6d.; American, 28s. to 40s. as to origin.

PETITGRAIN. — Paraguay is offered at 23s. 6d. per lb.

PIMENTO. — English-distilled berry 18s. per lb.; imported, 75s. R leaf, 27s. 6d. per lb. for small lots. Rectified

PINE.—Pumilionis on the spot is from 16s. per lb.; sylvestris, 25s.; Siberian (abietis), 12s. 6d. to 15s.

ROSEMARY.—Spanish oil on the spot is 7s. 6d. per lb., duty paid.

SAGE.—Spanish is from 8s, 9d, to 9s, 6d, per lb. on the spot and Dalmatian, 30s.

THYME.—Spot is 10s. 6d. per lb.

VETIVERT.—Spot is currently at about 95s, per lb.

#### UNITED STATES REPORT

NEW YORK, JULY 17: Both natural and synthetic grades of MENTHOL were higher. Brazilian was quoted up 25 cents to \$6.10 per lb. while the synthetic laevo material was also priced at \$6.10 (up ten cents). BENZOIN from Siam was fifty cents higher at \$6 a lb. Reports of Russian purchases raised GERANIUM OIL prices, making the Bourbon \$17:50 a lb., and the Algerian, \$16:00, each up 25 cents.

# HERB CROPS, 1957

THE following report has been received from Stafford Allen & Sons, Ltd. — The situation as regards the herb crops being grown on the company's farms at Long Melford, Suffolk, appears to be that the crops in general are likely to be rather light. The wet conditions dur-ing the winter and the comparatively small amount of cold weather and frost to break up the ground made the soil difficult to work, this being aggravated by the dry spring weather. In consequence, seeds in many cases have failed to germinate and, in particular, it has been a difficult year in which to get cuttings to strike. The recent spell of very hot weather has further aggravated the position.

[The report was prepared before the

recent rains.—EDITOR.]

BELLADONNA HERB.—A good first cut has been made but unless the weather is more favourable the second cut will probably be rather light.

CHAMOMILE.—The beds established last year are looking very well.

CLARY SAGE.—The fields planted out this year have a wonderful show of flowers and a good yield of oil is expected.

DIGITALIS.—The crop is looking well but the long spell of dry weather will probably have the effect of reducing the final weight of the herb available for drying.

DILL. — The unfavourable earlier weather conditions have resulted in irregular germination of the seed and coupled with the dry weather, has resulted in a patchy crop.

HYOSCYAMUS.—Whilst the first year's acreage has suffered from the dry spell a very good cut of the second year herb has been made.

LAVENDER.—The established plantations have made good growth and the sunny weather may have a good influence on the flowers, resulting in a good final yield of oil.

Parsley.—The plants being grown for this year's seed have made fair headway but need rain.

PEPPERMINT.—The original beds have suffered badly. The new beds had to be set out in dry weather with the result that the plants did not get a particularly good start and have only progressed slowly up to the present.

POPPY PETALS.—We have been able to make a fair collection although they are becoming increasingly difficult to obtain.

VIOLA PETALS.—We still hold a stock of the dried petals. There is only a very small market and we have now discontinued growing them.

# WORLD TRADE

S. African Commerce Seeks More Imports. — The Johannesburg Chamber of Commerce is to urge a new round of consumer goods import permits for all genuine South African importers. It was claimed at the quarterly meeting of the Chamber that while the average increase in merchandise exports from the first quarter of one year to the first quarter of the next ran at approximately 7 per cent.

from 1953 to 1956, the increase in the first quarter of 1957 has been no less than 22 per cent.

Vietnam Trade Control Move. — A new measure to control imports and exports of privately-owned companies in Vietnam has been announced by the Ministry of Commerce, according to the New China News Agency. It is one of a series of measures adopted by that Government to curb speculation. Planned purchases of twenty-one imported commodities including coconut oil and medicines are to be made by the State Trading Company. The private companies will buy goods for export at priccs fixed by the State Trading Company.

# PHARMACEUTICALS IN BRAZIL

# Higher home production and imports

DESPITE increased production and exchange restrictions Brazil's imports of chemical and pharmaceutical products continue to expand. Imports have increased in volume 80 per cent. since 1953, to 674,000 metric tons, and 70 per cent. in value, to the equivalent of U.S.\$144.8 millions. The cost of cruzeiros has risen 571 per cent. to 10,981 millions crs., due to currency depreciation and the high premiums paid at auctions for exchange certificates.

Compared with 1955 all classes of

imports, except chemicals and fuels, declined in value in 1956, the aggregate drop amounting to 5.5 per cent. Imports of soda ash increased 69 per cent. in volume, to 87,031 metric tons; caustic soda, 84 per cent., to 128,283; drugs and medicines, 8 per cent., to 377 tons. Imports of insecticides dropped 10 per cent., to 9,261 tons.

In January 1957, imports of alkaloids and antibiotics, allied products and by-products, vitamins, sundry medicines and drugs all showed further increases when compared with the previ-

ous January.

A considerable amount of industrial equipment is now entering from abroad on deferred payment terms, credits ranging from fourteen months to six years. In 1956 credits to equip chemical plants included the following amounts in U.S. dollar equivalents: 1,147,600 from French manufacturers; 1,000,000, 941,000 and 185,000 from U.S.A.; 42,000 from Belgium; 259,683 and 276,485 from Switzerland. Similar credits, granted in January this year, included: 8,586 from Switzerland: 261,400 from U.S.A.; 152,600, 158,875 and 396,190 from Germany.

Compared with 1955 Brazil's exports

of pharmaceutical and medicinal pre-parations dropped 28 per cent. last year, to U.S.\$302,000. Exports of manufactured organic chemicals increased 12 per cent. to U.S.\$2,713,000; menthol, 17 per cent. to U.S.\$2,695,000. Exports of carnauba wax increased 2.6 per cent. to U.S.\$17,297,000, but bois-de-rose dropped 28 per cent. to \$2,157,000.

# Chemical Industry

Brazilian production of basic chemicals increased 70 per cent. between 1955 and 1956, to 461,691 metric tons. The Chemical Manufacturers' Association estimates the value of local production of pharmaceutical and medicinal preparations at 9,364 million crs. and that of imported raw materials used in their manufacture at 1,251 millions, or 13.6 per cent. of the total value.

Production of penicillin and biological products, except special vaccines such as Salk, is now sufficient to meet the needs of the local market. Menthol, calcium gluconate, silver nitrate, salicylic and acetylsalicylic acids are produced locally in increasing quantities. Brazilian factories supply 65 per cent. of the demand for insulin and have started to make chloramphenicol. The Confederation of Industry calculates that 95 per cent. of the medicines and drugs consumed in Brazil were manufactured locally in 1956, compared with 10 per cent, in 1918.

The perfumery and toilet articles section, a comparatively recent development, is expanding rapidly; 300 factories, large and small, are operating in that branch in the State of Sao Paulo alone. Profits are high. So, also, are prices as the entire output of the factories, including tooth-pastes, toilet soaps and powders, are classified as luxury articles. In 1956 the section contributed 300 million crs. in excise taxes to the State coffers.

# TRADE MARKS

APPLICATIONS ADVERTISED BEFORE REGISTRATION

From the "Trade Marks Journal," July 10

For chemical products for use in agriculture and horticulture and for sale in England, Scotland and Wales (1)

Device with letters S A I, 764,293, by Scottish Agricultural Industries, Ltd., Edinburgh, 12.

For paper and cloth, all being sensitised materials for use in photography; and chemical products for use in developing and correcting sensitised paper and cloth (1)

DOCUNAX, 764,874, by Hall Harding, Ltd., London, S.W.1.

For all goods but not including toilet articles made of paper (3)

THREE DIAMONDS, 759,859, by Mitsubishi Shoji Kabushiki Kaisha, Chuo-ku, Japan.

For preparations and substances for laundry use; cleaning, polishing, scouring and abrasive preparations; soaps, and perfumes, non-medicated toilet preparations, essential oils, cosmetics, hair

lotions and dentifrices (3)

Device with word LEUNA, 761,115, by Veb
Leuna-Werke "Walter Ulbricht," Leuna, Ger-

For non-medicated toilet preparations, cosmetic preparations, brilliantine, hair lotions, toilet shampoos, dentifrices, soaps, perfumes, essential oils and toilet articles (3)

MELYS, 763,362, by Coty (England), Ltd., London, W.1.

For floor polishes (3)
TEALS TRED, 763,398, by Petama Polishes, Ltd., Ipswich, Suffolk.

For non-medicated toilet preparations (3)
Device of word APIELLA, 763,576, by F.
Farthing & Co., Ltd., Harlow, Essex.

For hair colouring matters in the form of cream (3)

Device of words INECTO COLOUR CREME, 763,952, by Rapidol, Ltd., London, W.7.

For preparations for use in waving the hair (3) CASUPERM, 764,314, by Beautisales, Ltd., London, W.1.

For soap; and shampoos for dogs (3) SHAMSHO, 764,746, by Poodex, Ltd., London,

For bandages, materials prepared for bandaging, first-aid kits, surgical and hygienic dressings; plasters, gauze, cotton and tissues, all for medical and surgical purposes; medicated ointment for use in the treatment of burns; and adhesive tape for surgical purposes (5)

CURITY, 743,581, by the Kendall Co., Boston, U.S.A.

For medicinal preparations for use in the treatment of rheumatism and the sike ailments and for use in the treatment of the skin (5)

ACILAN, 761,110, by F. Coutts & Sons, Lon-

don, E.C.2.

For raticides and insecticides (5)

RADIONE, 761,214, by Lipha Lyonnaise Industrielle Pharmaceutique, Lyons, France.

For pharmaceutical preparations and substances all for veterinary use (5)

OXONE, 762,309, by Boots Pure Drug Co., Ltd., Nottingham.

For ovarian extracts, being pharmaceutical extracts for use in obstetrics (5)

RELEASAN, 762,336, by Warner-Lambert Pharmaceutical Co., Wilmington, Delaware, U.S.A.

For all goods (5)

TRESAPEN, 762,946, by Glaxo Laboratories, Ltd., Greenford, Middlesex, CODRAX, 763,578, Reynolds & Branson, Ltd., Leeds. DIS-TULE, 764,473, by the Distillers Co. (Biochemicals), Ltd., Speke, Liverpool.

For pharmaceutical preparations for human use

FABATIN, 764,579, by Glaxo Laboratories, Ltd., Greenford, Middlesex.

For pharmaceutical preparations for human and veterinary use, sanitary substances, medical and surgical plasters, material prepared for bandaging, disinfectants and antiseptics (5)

GYNO-STEROXIN, 764,612, by J. R. Geigy, S.A., Basle, Switzerland,

For pharmaceutical preparations and substances

GANGLOSON, 764,786, by Aktiebolaget Astra, Apotekarnes Kemiska Fabriker, Sodertalje, Sweden.

For pharmaceutical preparations in tablet form consisting of compressed buckwheat leaf, rutin and iron (5)

FERRUTIN, B764,896, by Rutin Products, Ltd., Wokingham, Berks.

For pharmaceutical preparations in tablet form consisting of compressed buckwheat leaf and rutin, for use in the treatment of disorders of the circulatory system (5)

RUTIVITE, B764,897, by Rutin Products, Ltd., Wokingham, Berks.

For medicated drinks and pharmaceutical preparations for making such drinks (5)

KELDONA, 764,918, by Optrex, Ltd., Greenford, Middlesex.

For veterinary estrogenic preparations (5)

OXESTROL, 764,994, by Boots Pure Drug Co., Ltd., Nottingham.

For pharmacentical, veterinary and sanitary sub-stances, medical and surgical plasters, materials prepared for bandaging, disinfectants, and preparations for killing weeds and destroying vermin

BALSOCLASE, 765,326, ECTATON, 765,328, LADRICOL, SPARTOCINE, 765,330-31, by Union Chimique Belge, S.A., Brussels, Bel-

For machines for preparing and dispensing liquids

VENDAMAX, 756,890, by Cecil Strathmore Schofield, London, W.2.

For hairdressing apparatus (not machines) (8) Device of words SUPERMA BRUSHWAVE, 760,102, by Superma, Ltd., London, W.1.

# COMING EVENT

Items for inclusion under this heading should be sent in time to reach the Editor not later than first post on Wednesday of the week of insertion.

# Monday, July 22

SHEFFIELD PHARMACY CLUB, Trippet Lane at 7.30 p.m. Treasure Hunt.

# PRINT AND PUBLICITY

#### COMMERCIAL TELEVISION

PROGRAMME details are given to enable chemists to put in linking-up displays if they wish. Notice given is as far in advance of the programme date as can be guaranteed by the broad-

#### Sunday, July 28

LONDON: Silvikrin shampoo, Ibcol, Optrex eye lotion. Air-wick.

MIDLAND: Silvikrin shampoo, Brylcreem, 5-Day deodorant. Beecham's powders. Linc-o-lin beer shampoo. Opas tablets. Angel Face. Steradent. Nivea. Elastoplast. Banish.

NORTH: Brylcreem. 5-Day deodorant. Beecham's powders. Linc-o-lin beer shampoo. Sure Shield fruit-flavoured laxatives. Phensic. Steradent. Nivea, Elastoplast, Banish.

ALL: Sunsilk shampoos. Pepsodent tooth-paste. Toni home permanent, Top Secret. Nervone.

#### Monday, July 29

LONDON: 5-Day deodorant. Germolene. Beecham's powders. Phyllosan. Opas tablets. Drene. Iron Jelloids. Dettol. Nivea. Elastoplast. Air-wick. MIDLAND: 5-Day deodorant, Phyllosan, Angel Face.

NORTH: Alka-Seltzer, Sunsilk shampoos, Beecham's powders, Cephos, Air-wick,

ALL: Brylcreem, Amami waveset, Gleem toothpaste. Phensic.

#### Tuesday, July 30

LONDON: Miraglo, Brylcreem. Phyllosan. Optrex eye lotion. Phensic. Nivea. Elastoplast.

MIDLAND: Amami waveset. Germolene. Phyllosan. Band-Aid. Gleem tooth-paste. Air-wick.

NORTH: Amami waveset, Zoffora, Gleem toothpaste. Delsey toilet tissue.

#### Wednesday, July 31

LONDON: Amami waveset, 5-Day deodorant, Nivea. Elastoplast.

MIDLAND: Marzine, Sunsilk shampoos, Angel Face, Robinson's orange "smash." Immac.

NORTH: Marzine, Vodex, Amami wavesct, Cephos. Delsey toilet tissue.

ALL: Gleem tooth-paste, Drene.

### Thursday, August 1

LONDON: Beecham's powders, Phensic, Dettol. MIDLAND: Marzine, Germolene, Optone eye drops. Sunsilk shampoos. Flatter-Glo, Nivca. Elastoplast.

NORTH: Marzine. Milk of Magnesia tablets. Germolène, Phyllosan, Optone eye drops, 5-Day deodorant. Flatter-Glo. Delsey toilet tissue. All: Pepsodent tooth-paste, Gleem tooth-paste.

#### Friday, August 2

LONDON; lbcol.

massage

cream\*

MIDLAND: Phyllosan, Sunsilk shampoos, Band-Aid. Nivea. Elastoplast.

NORTH: Milk of Magnesia tablets. Phyllosan.

Zoflora, Cephos, Nivea, Elastoplast, ALL: Germolene, Gleem tooth-paste, Drene,

### Saturday, August 3

LONDON; Phyllosan, Drene.

MIDLAND: Milk of Magnesia tablets. Band-Aid. Zoflora. Drene. Rotosan, Nivea, Elastoplast.

NORTH: Milk of Magnesia tablets.

ALL: Moorland indigestion tablets. Beecham's powders. Sunsilk shampoos. Vita Glucose tablets.

Other products which are being currently advertised (but for which no day of showing has been notified) include: Rose's lime juice. Handjoy. New Araby soap. Pride lacquer, egg and lemon shampoo and scalp milk. Meet dog food. Fynnon salt. P.L.J. Vistascreen viewer.

#### DISPLAY

NEW HYGIENE, LTD., 268 Holloway Road, London, N.7: Crowner for Scentinel Quiff perfumed aerosol disinfectant.

#### PRESS ADVERTISING

J. C. & J. FIELD, LTD., Church Street, Amersham, Bucks: Field's perfume stick, In colour and black and white in women's magazines,

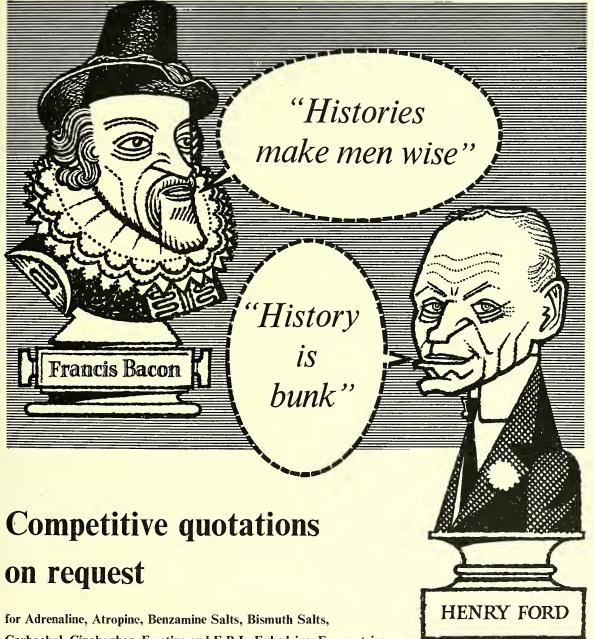


TWO PRODUCTS ON ONE CARD: Showcard prepared by Cupal, Ltd., Blackburn, for Sooth tan cream and aerosol (see p. 62),

# C. & D. WEEKLY LIST OF PRICES

0.0					_	_		
A = Advanced; R = R	teduced;	I.R.	?. = I	nclusi	ve	Reta	ail Price; *=Tax 30 per cent.; †=Tax 90 per c	ent.
JOHNSON & JOHN	ISON (G	T. Bl	RIT	MIN),	LI	D.	Radian ovals* 32 6 4 5	5 A
Johnson's baby powder*  I.R.P 2 0							NEW PRODUCTS AND PACKS	
Johnson's Daby pow	vuci ·					A	ABBOTT LABORATORIES, LTD.	
LEDERLE LABO	DRATOR	TEC		DIVIS			Harmonyl tablets 100 22	5
CYANAMID OF	GREAT	ВН	HA	IN,	LI	υ.	J. ALLEN RUBBER CO., LTD.	
(from July 15)							Marigold baby pants 4 11	
(		Ea	ich					
Artane elixir	16 oz.		10	14	9	R	CUPAL, LTD.	
tablets 2 mgm		7	0	10	6	R	Sooth Tan cream	
		58		87	ğ	R	1 doz. lots 12 0 2 6	5
	. 1,000						12 doz. lots 11 6	
5 mgm		14	0	21	0	R	aerosol $\frac{12}{2}$ doz, lots 71 0 13 0	
5 mgm	. 1,000	116	2	174	3	R		,
Folvite tablets	25	2	8	4	0	R		
a ottitte talotets	100	9	2	13	9	R	EVAN WILLIAMS CO., LTD.	
	1,000	85	õ	127	9	R	Hi-Glo shampoo bottle* 15 4 2 3	\$
Hetrazan tablets	100	10	ŏ	15	0	R	JEYES-IBCO SAUES, LTD.	
Methalan taolets	1,000	83	6	125	3	R	Jeves Fluid 4 oz. 9 0 1 0	
			0	1-0			8 oz. 13 6 1 6	
PARKE, DAVIS & CO., LTD.								
Adrenaline chloride solution							PHARMACEUTICAL SPECIALITIES (MAY	&
1:100 5-mil vial 3 3			3	R	BAKER), LTD.			
							Amargyl tablets 50 10 0	1
RADIOL CHEMICALS, LTD. (from August			ust	1)	500 90 0			
		$\mathbf{D}_{0}$	Z.				• • • • • • • • • • • • • • • • • • • •	
Radian-a*	11 oz.	32	6	4	5	A		
Radian-B*	4 oz.	32	6	4	5	A	Pre-shave lotion† 3 fl. oz. 6 6	
The state of				- 4		4	16 - 1 - 1 - 1 - 1 - 1 - 1 - 1	

4 5 A 4 5 A



for Adrenaline, Atropine, Benzamine Salts, Bismuth Salts, Carbachol, Cinchophen, Emetine and E.B.I., Ephedrine, Ergometrine, Homatropine, Hyoscine, Hyoscyamine, Ouabain, Physostigmine, Pilocarpine, Quinine, Strophanthin-K, Sulphaguanidine, and many other alkaloids and glycosides.

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PRESSWORK, TINS, CANISTERS
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DRUMS AND KEGS

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Power-driven Volumetric Liquid Filling Machine.

No. 4. Hand-operated Tubes, Pots and Jars Filling Machine.

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THE DRIGINAL

WIDOW WELCH'S FEMALE PILLS

Over 10d BOX PROFIT by ordering I dozen 4/3 size. Bonus given on every dozen (13). It pays to push this size.

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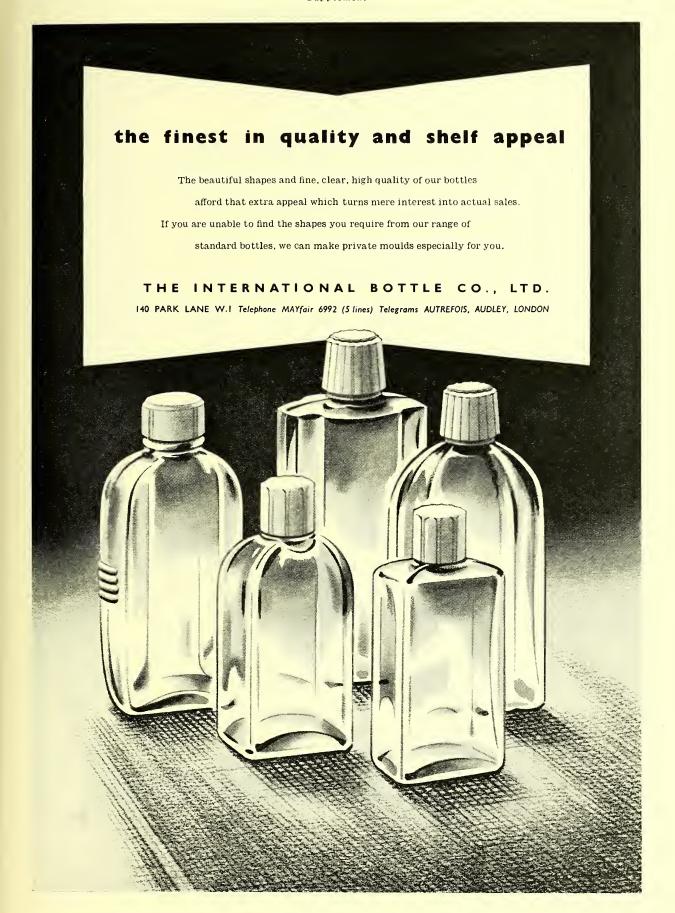
# Victory-V

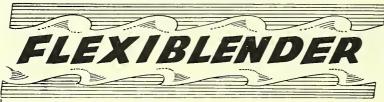
GUMS & LOZENGES for cold journeys



LINSEED LIQUORICE & V-LOZENGE VICTORY

FRYER & CO. (NELSON) LTD. NELSON, LANCS





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# A NEW CONCEPT IN MIXING

WHICH IS CREATING WORLD INTEREST.

The Bulk Liquid Mixer (Par Excellence). Produces a Uniform Volume Blend.

Folding or Fixed Arm Models. Supplied from stock or at short notice.

Standard Model. Anodised Aluminium for W/M Winchesters  $1\frac{1}{4}$   $4\frac{1}{4}$  New Model Stainless Steel for W/M Winchesters - -  $1\frac{1}{4}$   $4\frac{1}{4}$  New Model Stainless Steel for N/M Winchesters - -  $\frac{3}{4}$   $4\frac{1}{4}$   $4\frac{1}{4}$ 

New Model Stainless Steel for 5 gallon Carboys

MEET CUSTOMERS' REQUIREMENTS
IN STAINLESS STEEL, MILD STEEL,

LARGE POWER-OPERATED MODELS TO

ANODISED ALUMINIUM and all usual Alloys



12 Denmark Street, BIRMINGHAM 19, ENGLAND or from Luckham, Ltd., 591/3 Kingston Rd., Raynes Park, London, S.W.20



SIZE CLOSED DIAMETER 11"
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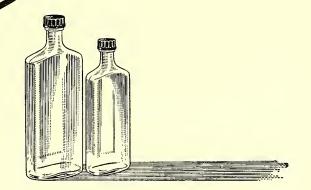


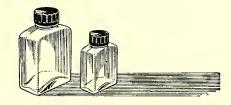
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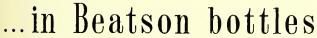


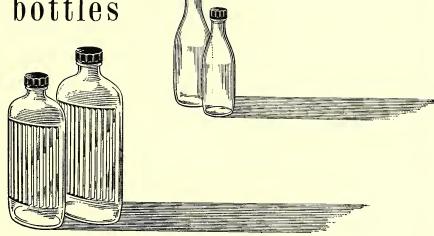
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The discerning Pharmacist demands a container which combines attractive appearance with sound functional design. Beatson Bottles are produced especially to satisfy both these requirements—they look well, store well, handle well, pour well—Beatson Medicals, Panels, Ribbed Ovals, Emulsions, Tablets, Olive Oils, Poisons, Winchesters and, in fact, every bottle used in Pharmacy is the better for being "BEATSON."









# BEATSON, CLARK & CO., LTD.

GLASS BOTTLE MANUFACTURERS

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"The Sign of a



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# Southalls

offer
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sanitary
towel

here is the Southalls range:

# COTTON WOOL STYLE

- 'BLUE STAR': with protective back and new *knitted* cover.
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'WHITE LILAC': soluble for easy disposal.

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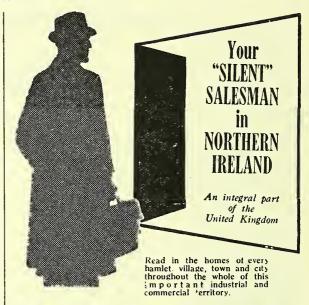
- 'KORONET'. all cotton-wool pad with unique non-stretch cover.
- TRAVLA': compressed especially made for the handbag.

and they're good because they're

# by Southalls

makers of sanitary towels for over 70 years

SOUTHALLS (BIRMINGHAM) LTD., CHARFORD MILLS, BIRMINGHAM, 8

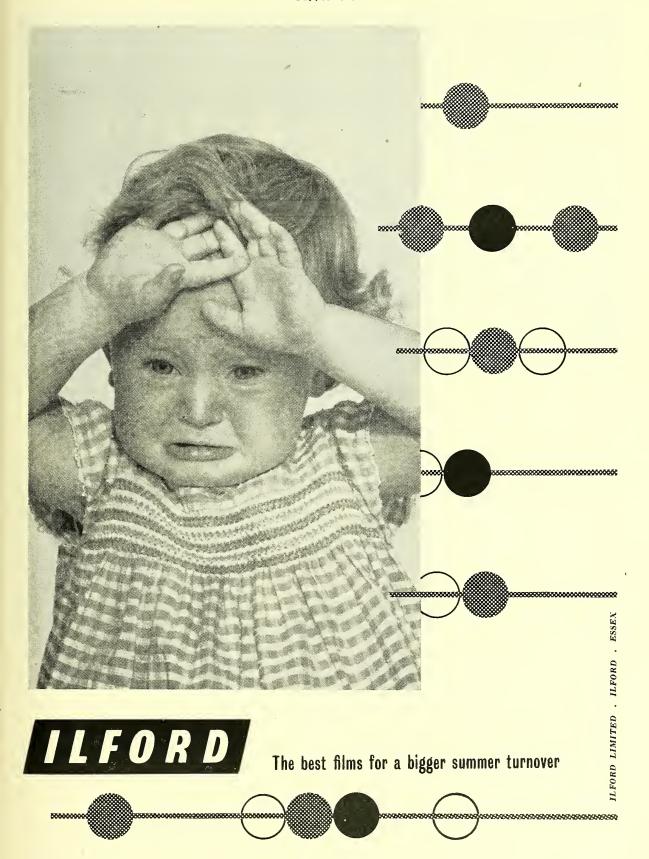


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The supreme antiseptic base. R.W. 250 For ANTISEPTICS, DISINFECTANTS, DEODORANT SOAPS and CREAMS

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The Chloroxylenol of the B.P. LIQUOR CHLOROXYLENOLIS B.P.

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# LIGHTWEIGHT NYLON ELASTIC YARN SURGICAL STOCKINGS. N.H.S.

- CLOSED TOES 8½", 9", 9½", 10" and 10½" in foot sizes
- OPEN TOES in sizes Small, Medium and Large
- Special finish with extensible nylon giving a modern matt appearance and exceptional comfort
- Closed toe type may be worn with or without overstocking
- Conforming to N.H.S. specification and available for supply against E.C.10 forms

Each pair packed in attractive cellophane envelape and in auter baxes of six pairs.

TRADE PRICE
35/6 per pair

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# E. SALLIS LTD

VERNON WORKS · BASFORD · NOTTINGHAM Phone: NOTTM. 77841/2 Grams: "EESINESS"



It's Golden Jubilee Year



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Sell the size for the job!

The Thermos national advertising campaign is now running. It features the four sizes of flask models. Recommend the correct size for the job and sell more flasks!



#### MINOR SIZE

8 fluid ounces No.  $14\frac{1}{2}$ —5s. 11d. No.  $15\frac{1}{2}$ —6s. 6d.



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26 fluid ounces No. 1414— 9s. 9d. No. 1515—10s. 8d.

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16 fluid ounces No. 14—6s. 7d. No. 15—7s. 2d.



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The No. 15 range have the snap-on polythene stopper. The No. 14 range are fitted with moulded top corks. All fitted with the wonderful polythene pourer lip.



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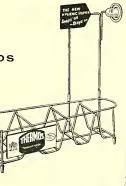
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the ideal treatment for all muscular pains . . .

RADIARAY INFRA RED and Radiant Heat Lamps

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Hair Nets are a matter for the \*Specialists

'HALO' Regd.

'TANGO'

ROUND CARDS holding 4 doz. nets in 'Halo' or 'Tango' quality.

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HAIR NETS

The World's Finest Hair Nets
PACKS TO SUIT YOUR TYPE OF TRADE

The qualities which have made 'Halo' and 'Tango' pre-eminent throughout the world stem from the experience of specialists devoted entirely to the manufacture of hair nets. The lasting qualities of these invisible-in-wear nets cannot be beaten and every net is guaranteed perfect.

Made in Pure Silk, Nylon, and Rayon, in all hair shades.

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HANGING CARDS

Packed 6 doz. nets each in single envelope. 'Halo' or 'Tango' brands.

The "HALO H.2"

Fancy Border Slumber Net Supplied in printed transparent single envelopes packed 3 doz. in Display

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Two 'Halo' Nylon nets, in each envelope, packed 3 doz. envelopes on Hanging Card.

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# more customers than ever for Meggeson Dyspepsia Tablets

Derive the fullest benefit from this increasing demand throughout the months ahead; and take advantage of the highest profit margin. Look to your stocks now.

RETAIL 1/10 PER TIN



# It's a shirt-sleeved summer



NOW is the time to sell cool réfreshing breezes to your customers —now they will welcome the timely suggestion of a PIFCO Electric Fan.

You can use it on a table or it can be easily affixed to a wall. The fan body swivels to any desired position. Flexible plastic blades for safety. Modern styling for sales appeal.

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Retails at **75**/- complete.

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ORDER FROM YOUR USUAL WHOLESALER. WRITE FOR FULL DETAILS OF THE COMPLETE RANGE OF FAMOUS PIFCO ELECTRICAL SPECIALITIES.

PIFCO LTD · WATLING STREET · MANCHESTER 4
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When your customers ask for a Compressed Sanitary Towel



# SANTALUXE

in individual cartons

They have been selling for years and are considered in every way a most satisfactory and reliable product.

From all wholesalers.

ROBERT BAILEY & SON, LTD.

SURGICAL DRESSINGS MANUFACTURERS

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Phone: STEPPING HILL 3006/17 Grams: \*\*UNDISPUTEO\*\* \$TOCKPORT



Still the best hair tint. In all natural Shades. Stocked by all wholesalers. Trade Prices: 1 oz., 21/- per doz., 2 oz. 36/- per doz. Purchase Tax 90%.

Retail Prices: 3/11 and 6/8½ per

3/11 per bottle.

bottle respectively.

GOLDEN SHADEINE—2 oz. size at 21/per doz. Purchase Tax 90%, Retailing

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Cine photography is growing at a fantastic rate as people discover that cine films cost no more to take than snapshots.

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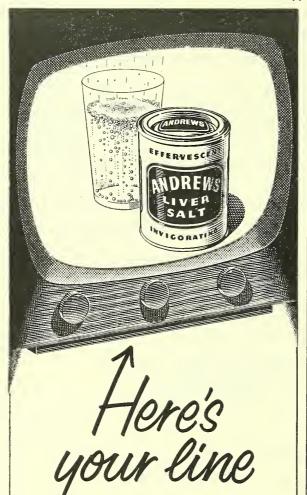
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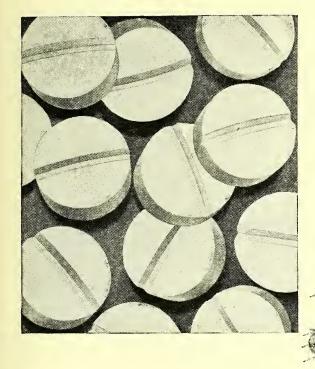
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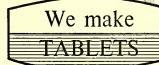
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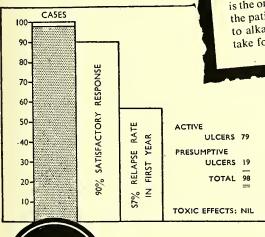
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TABLE II

-	_			
Group	Active Ulcers	Presumptive Ulcers	Totals	
Group		17 (89.0%)	80 (81 · 7%)	
A	63 (79.6%)	1 (5.5%)	9 (9.2%)	
В	8 (10.2%)	1 (5.5%)	7 (7.1%)	
С	6 (7.6%)	0(-)	2 ( 2.0%)	
D	2 ( 2.5%)		98 (100%)	
TOTALS	79 (100%)	19 (100%)		
		Cand D	Gand D have elected to go	

"Four of the nine cases in groups C and D have e to surgery, and one of the remaining cases has a hiatus hernia as well as a duodenal ulcer. Experience of treating these 'Failures' over the past six years leads one to believe that no form of medical treatment will be effective and that surgery is the only hope of relieving their symptoms. In 75% of cases the patients were of the opinion that the tablets were superior to alkaline powders, and they found that they were able to take foods which they had avoided for years.

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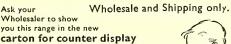
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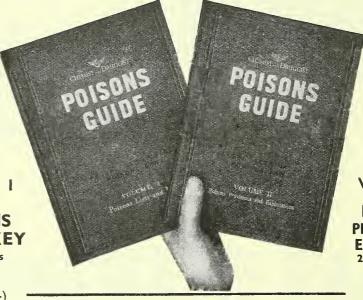
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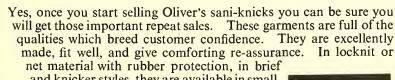
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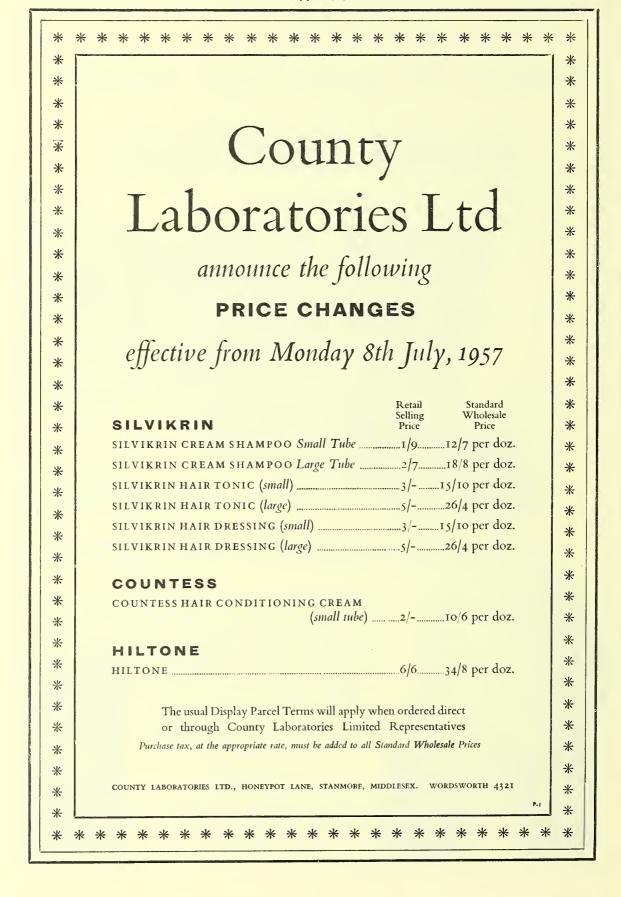
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The salary offered for this post is £654—£1,260 p.a. In addition an expatriate officer will be paid an inducement allowance of £180 on a salary up to £700 p.a. rising to £240 when the salary exceeds £700 p.a. Point of entry into the scale will depend upon previous experience. The appointment will be initially for two tours of 12 to 18 months and will be renewable, by mutual agreement, for a further tour. On satisfactory completion of the agreement a

on satisfactory completion of the agreement a gratuity of £25 where salary and inducement allowance are less than £1,000 or £37 10s, when salary exceeds £1,000 p.a. is payable in respect of each completed period of three months' services vice.

outfit allowance of £60 is payable on first

appointment.

appointment.

Partly furnished quarters are provided at a rental of 8½ per cent, of salary excluding inducement allowance, and an expatriate officer appointed will be eligible for 7 days' leave on full pay for each completed month of service in Nigeria. A Nigerian Officer will be eligible for 5 days' leave for each month. Free first-class passages are provided for an expatriate officer on first appointment on vacation leave and on completion of his agreement. Free first-class passages to Nigeria will in certain circumstances be provided for nonexpatriate officers.

certain circumstances of provided for non-expatriate officers.

Arrangements can be made to enable an officer to continue his National Health Service Super-annuation Scheme contributions and details of the revised salary and gratuity in such cases will accompany application forms.

will accompany application forms. Applications should be submitted not later than July 31, 1957, on the appropriate forms which will be forwarded together with additional information on receipt of an addressed foolscap envelope by the Adviser on Staff Recruitment, London Office, University College Hospital, Ibadan, 57 Catherine Place, Palace Street, London, S.W.1.

#### WALSALL HOSPITAL MANAGEMENT COMMITTEE

MANAGEMENT COMMITTEE

Deputy Chief Pharmacist
required (Category IV); duties mainly concerned with control of modern manufacturing and aseptic unit. Applications, together with names of two referees, to Group Secretary, General (Sister Dora) Hospital, Walsall. C 6854

# WEST MIDDLESEX HOSPITAL

ISLEWORTH, MIDDLESEX,
Pharmacist and Assistant-in-Dispensing
required. Whitley salary and conditions applicable. Applications stating age, qualifications and
experience with names of two referees to Chief Pharmacist

# STUDENTS

SOUTH DEVON TECHNICAL
COLLEGE, TORQUAY
Full-time courses are offered for students
pursuing the Intermediate Examination of the
Pharmaceutical Society. Next course comnences September 16, 1957. Write for full
details, prospectus, and list of registered lodgings at reasonable rates to the Registrar.
C 6872 C 6872

# SITUATIONS VACANT RETAIL (HOME)

RETAIL (HOME)

BOOTS THE CHEMISTS invite applications for engagement as Pharmacists. Good prospects, permanent basis, salary according to age and experience, eligibility for Pension and Life Assurance, etc. Applications should be made to Retail Staff Department, Station Street, Nottingham, or alternatively through the nearest branch to the local Territorial General Manager stating age, experience and district preferred. C6717 EAST KENT. Manager wanted for small branch pharmacy, easily run, in a congenial and healthy position. Would suit young qualified man. Flat available. Efficient staff. Good salary. Apply giving usual particulars to Box C 4819.

ORRIDGE & COMPANY require stocktakers for London and South England. Attractive salaries. Expenses paid. Previous experience preferred but not essential. Apply by letter to 184 Strand, London, W.C.2.

PLYMOUTH. Manager required for modern pharmacy on new estate. Apply Superintendent Chemist, Plymouth Co-operative Society, Ltd., Pharmacy Office, Vauxhall Street, Plymouth. Also vacancy for young pharmacist with early prospects of promotion. Also locum for few weeks' relief.

C4818

PORTSMOUTH. Branch Manager or Manageress Pharmacist will shortly be required for Pharmacy section of modern departmental store.

geress Pharmacist will shortly be required for Pharmacy section of modern departmental store. Wages based on sales, at present £16 17s, 6d. per week (male) plus sales bonus. Application in writing stating age, experience, etc., to the Personnel Manager, Co-operative, 110 Fratton Road, Portsmouth. C 47
YORK CO-OPERATIVE CHEMISTS SO

YORK CO-OPERATIVE CHEMISTS SO-CIETY, LTD., offer positions to pharmacists of either sex in lovely City of York. One of these positions carries tenancy at moderate rental of a modern flat in one of the best residential suburbs. All are permanent, progressive and pensionable positions with good wages. Apply Superintendent Pharmacist, 22 Railway York.

YOUNG pharmacist, male, required to share management of busy pharmacy with proprietor. Modern self-contained flat available over premises, rent and rates free. For full details apply R. S. Taplin, 133 Hersham Road, Wal ton-on-Thames.

# LOCUMS WANTED

PETERBOROUGH, Locum pharmacist required for 13 weeks commencing August 6. Possibility of permanency. No rota duties. State terms and particulars to Superintendent Chemist, Peterborough Co-operative Chemists, Ltd., Park Road, Peterborough. C 4795

#### WHOLESALE

A VACANCY exists for the post of medical representative in the Aberdeen-Dundee area in an established company specialising in the sale of ethical preparations to the medical profession. Knowledge of the area and experience in the field of medical propaganda an advantage. Good salary and expenses. Car provided. Pension scheme. Write for interview giving full details to the Manager, Medical Division, Calmic Limited, Crewe Hall, Crewe, Cheshire.

A VACANCY exists for the post of medical representative in Kent in an established company specialising in the sale of ethical preparations to the medical profession. Knowledge of the area and experience in the field of medical propaganda an advantage. Good salary and expenses. Car provided, Pension scheme. Write for interview giving full details to Calmic Limited, 2 Mansfield St., London, W.1. C 6871

Limited, 2 Mansfield St., London, W.1. C 6871

AN ESTABLISHED pharmaceutical company of highest repute, marketing a range of nationally known products to wholesale and retail chemists, requires an additional representative to cover Lancashire, Westmorland and Cumberland. Payment is by salary. Pension and incentive bonus schemes are in operation, all expenses paid and a company car provided. Gentlemen with a pharmaceutical background, with or without experience of representation, who reside on the appropriate territory, should apply in confidence, giving details of age, experience and salary required, to Box C 6868.

A VACANCY exists for the post of medical

apply in confidence, giving details of age, experience and salary required, to Box C 6868. A VACANCY exists for the post of medical representative in Manchester in an established company specialising in the sale of ethical preparations to the medical profession, Knowledge of the area and experience in the field of medical propaganda an advantage. Good salary and expenses. Car provided, Pension scheme. Write for interview giving full details to the Manager, Medical Division, Calmic Limited, Crewe Hall, Crewe, Cheshire. C 6869 BECAUSE of expansion of our Sales Force there are vacancies throughout the country for representatives to call on doctors, hospital and retail pharmacists. Applicants should have some pharmaceutical background or training and should be between 25-35 years. Previous selling experience will be an advantage, Remuneration is by salary and a prize scheme is operated. Expenses are allowed, company car provided and there is a non-contributory pension scheme. Applications giving full particulars of education and past experience should be addressed to Sales Manager, Lederle Laboratories Division, Cyanamid of Great Britain, Ltd., Bush House, Aldwych, London, W.C.2. C 332 BOTTLE SALESMAN WANTED. Salesman representative required with previous experience

BOTTLE SALESMAN WANTED. Salesman representative required with previous experience in selling bottles, jars and screw caps, Write giving full particulars to Reliance Trading Company, 75 Fairfax Road, London, N.W.6. C 6839 pany, 75 Fairtax Road, London, N.W.b. C 6839 CHEMIST, male, 21-30, B.Sc., or A.R.I.C., required for analytical work in pharmaceutical laboratory, London, N.16. Industrial experience an advantage. Good commencing salary and regular review, Five-day week, Non-contributory pension scheme. Write Personnel Manager. Box C 6863.

# ETHICAL PHARMACEUTICAL REPRESENTATIVES

Starting salary not less than £750 per annum, depending upon experience, car provided. Young men with Medical and/or Ethical Pharmaceutical experiand/or Ethical Pharmaceutical experi-ence are required as representatives in S. Wales, S.W. England and Scotland. The candidates selected must be pre-pared to live in the area. Generous Pension and Life Assurance Scheme. Write to Personnel Manager, A. & G. Nicholas, Ltd., Ethical Pharmaceuticals, Slough, Bucks. Please quote: ETH/ PH/RFP Slough, PH/REP.

EXPERIENCED representative required by well-known London wholesale house specialising in toilet requisites and imported merchandise, to cover the Midlands, Must have good connections with departmental stores, chemists and Co-ops. Write fullest particulars to Box C 4814. EXPERIENCED REPRESENTATIVE required, calling on chemists, to carry as additional line imitation jewellery on commission basis by large wholesale jewellery firm. Box C 6810. GENATOSAN, LIMITED (a member of the Fison Group), have vacancies for one or two qualified chemists, preferably with a pharmaceutical pearlied chemists, preferably with a pharmaceutical qualification, in the Pharmaceutical Development Department. Applicants, who should not be more than 32 years of age, are required for pharmaceutical and toilet product formulation teams. These posts call for an interest in modern techniques and a keen experimental approach to pharmaceutics. Previous employment in the manufacturing field is not essential and retail experience could be valuable. The Department is expanding rapidly and has well-equipped modern laboratories; working conditions are excellent. The posts are well remunerated and superannuated. Applications containing details of age, education and experience should be addressed to the Personnel Officer, Genatosan Limited, Derby Road, Loughborough, Leics. Please quote reference 26.

#### THE WELLCOME **CHEMICAL** WORKS

have a vacancy for someone who will be responsible for the Finished Stock Warehouse, and the assembly, packing and dispatch of home and export orders together with transport. The post is a responsible one and the salary will be commensurate. A good education at least up to intermediate degree standard would be an advantage.

Candidates should preferably have a good background knowledge of modern management techniques, particularly Work Study and Production Control with experience of organising, developing and controlling a large department, Ability to work as a member of a team is also important.

Good contributory pension scheme, excellent conditions of employment.

Applications, giving full details of age, education and experience with salaries earned, should be addressed to the Personnel Manager, Burroughs Wellcome & Co., The Wellcome Foundation, Ltd., Wellcome Chemical Works, Dartford, Kent. C 6857

# Situations Vacant—Continued

FOREMAN TABLET MAKER: Wm, R, Warner & Co., Ltd., Pharmaceutical Manufacturers, Chestnut Avenue, Eastleigh, have immediate vacancy for a man with wide experience as a tablet maker and with experience as a foreman in this occupation. This is a unique opportunity for a capable man seeking a permanent position with a well-established and expanding company now operating in newly erected factory in Hampshire. Ideal working conditions, non-contributory pension scheme. Removal expenses to Eastleigh paid by the company. 42]-hour week, Write full details and wages required to Personnel Manager, at above address. C 6885

#### MEDICAL REPRESENTATIVES

Due to continued expansion a Phar-Due to continued expansion a Pharmaceutical Company of International repute has vacancies for Medical Representatives in all areas of the U.K. These positions, which offer considerable scope in a young and progressive Company, are open to young men with pharmaceutical qualifications or pharmaceutical background.

A good commencing salary will be paid and a car will be provided. The Com-pany operates a generous non-contri-butory Pension and Life Assurance Scheme.

Applicants, giving age, full details of career to date and stating the territory in which they are interested should write quoting reference B.M.R. 7 to Box C 6858.

OPPORTUNITY for young pharmacist of either sex in laboratories of London manufacturing chemists. Five-day week, canteen, etc. Part-time candidate might be considered for appointment. Reply to Box C 4817.

LOZENGE MAKER/IMPROVER. Chargehand lozenge maker required for the manufacture of medicated lozenges. Experienced operator preferred by consideration given to anyone pre-

medicated lozenges. Experienced operator preferred, but consideration given to anyone prepared to be trained for the position. Permanent employment with good rates of pay and producilon bonus. Five-day week. Canteen. Pension Scheme. Apply in person, or in writing, to Stafford Allen & Sons, Ltd., 20–42 Wharf Road, London, N.1.

# PHARMACEUTICAL COMMITTEE FOR THE COUNTY OF LONDON

(National Health Service)

#### APPOINTMENT OF SECRETARY

Applications are invited from Pharmaceutical Chemists for the whole-time position of Secretary to the London Pharmaceutical Committee. The Salary will be a matter for negotiation, and there will be participation in the Committee's non-contributory Superannuation Scheme after an initial period of service, Retail and Administrative experience and a knowledge of the National Health Service Regulations will be an advantage.

Applications, in writing, stating age, qualifications and experience, together with the names of two referees should reach the undersigned not later than Tuesday, 6th August. W. H. Green, M.P.S., Chairman of the London Pharmaceutical Committee, 107 Humber Road, London, C. 6878

MEDICAL REPRESENTATIVE required for London area. Applicants between 25 and 40 years of age will be considered. A good pharmaceutical background is an important asset. Previous experience as medical representative not essential as full instruction will be given. Please state age and salary required. Box C 326.

# NULACIN ADRENOXYL BECANTYL

are available to patients on prescription as a result of the enterprise of Horlicks, Ltd.

Other ethical pharmaceutical products

will be introduced from time to time and a young pharmacist is needed to help with the work of formulation and

development.

Write giving full details of education, Write giving full uctails of training and experience to Personnel Manager, Horlicks, Ltd., Slough, Bucks.

C 6883

REPRESENTATIVE required for Manchester area and northern counties of England to handle chemists' printed labels, tablet cartons, etc. Connections with chemists, doctors and hospitals desirable and some printing knowledge an advantage. Salary, commission and expenses. Contributory pension scheme after probationary period. Write Box C 6841.

REPRESENTATIVE REQUIRED by well-known pharmaceutical house for their Birmingham territory.

Must be thoroughly experienced and able to take over and develop existing connection in drugs, packed goods, sundries, etc. Salary, commission and expenses paid, car provided, pension scheme.

Full details of past experience, etc., to Home Sales Director, Ayrton, Saunders & Co., Ltd., Hanover Street, Liverpool

SMALL, SUCCESSFUL and progressive chemical company specialising in making pharmacal company specialising in making pharma-ceutical ointments, greases and powders, re-quire the services of an experienced salesman, capable of calling on other manufacturers and wholesalers. No direct retail contact is envis-aged. The position offers great scope for de-velopment. Reply in confidence stating age, experience and salary required. Box C 4790. THOMAS KERFOOT & CO., LTD., have a vacancy for a representative experienced in calling on chemists in the Glasgow, Lanark, Renfrew, Stirling and Dumfries area. Applicant should not exceed 35 years of age and must reside in or near Glasgow. A pension scheme is in operation and a community continuation. scheme is in operation and a company car is provided. Apply in first instance giving fullest details to Sales Manager, Thomas Kerfoot & Co., Ltd., Vale of Bardsley, Lancashire, C 6867

THREE representatives required to contact hospitals, institutions, etc., in the following areas: (1) London; (2) South Lancs; (3) South Wales and West Country. Duties will consist of medical propaganda, selling and lecturing. These are well-paid positions, permanent and superannuated. They demand ambitious, educated men, preferably with experience in this field. Full training will be given. Applicants should send fullest details to Box C 6879.

WILLIAM FREEMAN & CO., LTD., require an experienced representative for their Suba-Seal and Suba-Maid Domestic Divisions to fill an established vacancy in Derbyshire, S. Yorkan established vacancy in Derbyshire, S. Yorkshire, part Cheshire and N. Staffs, calling upon chemists, hardware dealers, ironmongers and large stores. Remuneration by salary and commission, generous car allowance and expenses, staff superannuation. Car owner essential. Applications in writing to General Sales Manager, Suba-Seal Works, Peel Street, Barnsley, or phone Barnsley 4081 for interview. C 6876

#### WHOLESALE (OVERSEAS)

#### KENYA A Deputy Manager

With Pharmaceutical qualification is required by a Fine Chemical Organisation for its East African Branch. The position is permanent and offers considerable prospects for future advancement. Attractive service conditions will be offered to a Pharmacist who is already, or who is prepared to take up permanent residence, in Kenya. Detailed applications to Box C 6859.

# SMITH & NEPHEW PHARMACEUTICALS, LTD.

PHARMACEUTICALS, LTD.

New subsidiary of the famous British Group of Companies, offers careers to Pharmacists as Medical Representatives. Vacancies exist in two territories:—

S.W. England — Comprising Gloucestershire, Oxfordshire, Berkshire, Wiltshire, Dorset, Somerset, S.E. England—comprising Kent, South London, Middlesex, Surrey, Sussex, Hampshire, Devonshire and Cornwall.

Successful candidates will become members of an enthusiastic team of pharmacists visiting senior medical men. Previous experience, whilst desirable, is not essential as adequate training will be given. The work of our Medical Representatives is strongly backed by the close integration of the Company with the Group's Research Organisation. Salary in accordance with experience and qualifications; attractive Pension/Life Assurance and Bonus, after qualifying period; full expenses; company car provided. Apply in writing to: Director, Smith & Nephew Pharmaceuticals, Ltd., Bessemer Road, Welwyn Garden City, Herts.

C 6886

# **OVERSEAS APPOINTMENT**

progressive important Anglo-American manufacturers of popular and ethical products, with world-wide ramifications, have vacancies for Overseas Sales Supervisors in Far East and Middle East. Export experience, preferably in the field, essential. Successful applicants would reside abroad and must be prepared to be mobile. For really live, energetic and able men the position is progressive. Preferred age 28-35. Good salary and conditions. Employees of the Company have been informed of this advertisement. Write in strictest confidence, in fullest detail (with photo) to "Export Director," Box C 6887.

# BERDOE & FISH

Chemists' Transfer Agents and Valuers

41 ARGYLE SQUARE, KING'S CROSS, W.C.I (opposite St. Pancras and King's Cross Stations)

Wanted immediately good class businesses in London, Home Counties and South Coast. Private clients waiting with cash up to £10,000.

All Valuations and Stocktakings, carried out under personal supervision of principals.

Established 1870 Phone: TERminus 3574

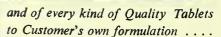
# Buckley Bowker Tablet Co. Ltd.

29 Parkfield Street, London, N.1.

Telephone: Canonbury 3401

Manufacturers of the highest Standard

# <u>Contraceptive</u> Joam Tablets



#### Situations Vacant—Continued

A FIRM of pharmaceutical importers and dis-A Fixed of parameterized iniporters and distributors with head offices in Baghdad are desirous of appointing a Field Supervisor for the direction and control of a team of Medical Representatives operating in Iraq. Preference for Subject but the successful applicant must have considerable practical experience in this type of work either as a field supervisor or a representative. The appointment will be subject to a contract for a minimum of 2 years, return air fares being paid by the company. Further air fares being paid by the company. Further details of this appointment will be given at interview. Please write giving full details as to education and career to date to Box C 6855

#### **PARTNERSHIPS**

PARTNERSHIP offered to pharmacist (male or female). interpnarmacist (male of female), inter-ested in starting own business in chem-ist shop by doctor with German medical degree, Well acquainted with all British ethical preparations, suffi-cient capital available, Box C 4809,

### **AGENTS WANTED**

AGENTS REQUIRED to carry additional lines in the following selected areas:—North-east England, Manchester, Liverpool, Birmingham. Scissors and manieure instruments for sale direct to retail establishments are offered by reputable Sheffield firm at generous commission rates. Details to Box C 4812.

# SITUATIONS WANTED LOCUMS SEEKING ENGAGEMENTS

**EXPERIENCED** unqualified lady pharmacist available immediately for locums, dispensing, counter work. London area preferred. Whole-or part-time. Reply 6A Wetherby Gardens, London, S.W.5, or phone Freemantle 7836.

#### WHOLESALE

BUYER (M.P.S.), fully experienced all aspects OUTER (M.P.S.), fully experienced all aspects of chemical and pharmaceutical purchasing, etc., for home and export seeks similar position with progressive organisation in London, Excellent knowledge of best sources of supply. Box C 4821.

C 4821.

EXPORT EXECUTIVE, 35 years' experience packed pharmaceuticals, ointments, powders, perfumery. Present yearly turnover £100,000, could be substantially increased by company with modern production methods and approach to packaging requirements of overseas markets. Excellent connections home and abroad. Sound knowledge manufacture and factory control. Would accept similar position with company wishing to expand their export business. Box C 4816.

PH.C., experienced executive, sales management, medical promotion, skilled medical writer; manufacturing (pharm./vet./cosmctic). Possessor of original formulæ and registered trade marks. Seeks interesting appointment, works or admin. (NOT London.) Where necessary, could attract large expital investment. Strictest confidence large capital investment. Strictest confidence observed and required. Box C 4807.

SALES EXECUTIVE of well-known international company, with long practical experience of selling to chemists and retail trade, age 39, wishes to take up new position and seeks discussion with interested concern. Box C 4810.

### **AGENCIES WANTED**

AGENT offers active representation amongst wholesale, high-class retail and Co-operative chemists in Lanes and Yorks, Existing engagement is non-competitive to anything. Excellent connection. Car. Box C 4815.

# BUSINESS OPPORTUNITIES

ETHICAL MANUFACTURERS. We specialise

ETHICAL MANUFACTURERS. We specialise in medical detailing to doctors and hospitals in Lancashire, Cheshire, Shropshire and North Wales. Maximum results. Distribution of samples and mailing. N.H.S. and private doctors covered. Service being extended to Ireland. Enquiries to Box C 4822.

OUR FACTORY AT YOUR DISPOSAL. We have modern facilities for the production, under your own Brand, of preparations like bath cubes, bath salts, powder in envelopes, perfumes, talcum powder, etc., as well as technical products, e.g., disinfectant blocks, moth repellants and agricultural tablets. Write Box A.C.26825, Samson Clarks, 57-61 Mortimer St., W.1.

C 314

REPRESENTATIVES calling chemists, whole-

W.1. C 314
REPRESENTATIVES calling chemists, wholesalers and industrial medical officers are offered
an opportunity to acquire a remunerative and
well-produced speciality product on satisfactory
commission terms with guaranteed closed territoricis. Experienced representatives of integrity
and standing, fidelity bonded and whose present
commitments allow of their adequate attention
to a new product with considerable sales potential are invited to apply for further details of tial are invited to apply for further details of this proposition giving an outline of their quali-fications and territorial interests to Box C 4806.

# WANTED

LARGEST CASH BUYERS of photographic equipment of every description, outdated film and paper, etc. Spears, 14 Watling St., Shudehill, Manchester, 4. Phone: Blackfriars 1916. Bankers: Midland Bank, Ltd. C 306 TO CHEMISTS. Wanted, job lots and surplus stocks of toilet goods, etc. Also shop-soiled goods, anything suitable for markets, bought for cash. Hayward & Co. (Colwyn Bay), Ltd., Colwyn Avenue, Rhos-on-Sea, Colwyn Bay, Phone 44535 (after 6 p.m. 2260). C 4813 TUBE-FILLING MACHINE, fully automatic, in first-class running order, required by manufacturers for the filling of pharmaceutical ointments. Single or three-phase motors, 230-250 a c. Reply with full particulars to Biorex (Marketing), Ltd., 47/51 Exmouth Market, London, E.C.I.
WE WILL PURCHASE for cash a complete stock, a redundant line, including finished or partly finished goods, packing raw materials, etc. No quantity too large. Our representative will call anywhere. Write or telephone:—Lawrence Edwards & Co., Ltd., 6/7 Wellington Close, Ledbury Road, London, W.11. Tel.; Bayswater 4020 and 7692. C 140

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100 BAYS of brand new adjustable steel shelving, 72 in. high by 34 in. wide by 12 in. deep, stove-enamelled bronze green. Sent knocked down—6 shelf bay—£3 15s. Sample delivered free. Quantity discounts. N. C. Brown, Ltd., Eagle Steelworks, Heywood, Lancs. Telephone; 69018 Ltd., Eagle-Telephone: 6 Lancs. C 6554 69018.

SPRING GAY FASHION JEWELS FREE LIST FROM L. FRANKENBERG, LTD., 37 HOUNDSDITCH, LONDON, E.C.3

C 269

# MISCELLANEOUS

FOR THE NEWEST in fashion jewellery write to: Jodez (Manchester), Ltd., 8/10 Shudehill, Manchester, 4; largest selection in the Country. C 6842 SUPPOSITORY EXCIPIENTS "IMHAUSEN"

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BECAUSE it is so soothing, Savlon Antiseptic Cream is particularly good for treating children's cuts and burns. It relieves smarting immediately.

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